

Université d'Ottawa
DOCUMENTS COLLECTÉS
CO

UNIVERSITY OF OTTAWA

BIBLIOTHÈQUE DE DROIT
U.O.
O.U.
LAW LIBRARY

SESSIONAL

Université d'Ottawa
DOCUMENTS OFFICIELS
GOVERNMENT PUBLICATIONS
University of Ottawa

PAPERS.

VOLUME 7.

FIRST SESSION OF THE SEVENTH PARLIAMENT

OF THE

DOMINION OF CANADA.

SESSION 1891.



VOLUME XXIV.

OTTAWA:

Printed by BROWN CHAMBERLIN, Printer to the Queen's Most Excellent Majesty.
1891.

See also Numerical List, page 4.

ALPHABETICAL INDEX
TO THE
SESSIONAL PAPERS
OF THE
PARLIAMENT OF CANADA.

FIRST SESSION, SEVENTH PARLIAMENT, 1891.

NOTE.—In order to find quickly whether a paper has been printed or not, the mark (n.p.) has been added to those not printed; papers not so marked, it may be understood, are printed. Further information concerning each paper is to be found in the List, commencing on page 4.

A

"Admiral," Steamboat.....(n.p.)	52, 52a, 52b, 52c
Adulteration of Food.....	5b
Agriculture, Annual Report.....	6
American Cheese.....(n.p.)	32
Amherstburg Dry Dock.....(n.p.)	40d
Analysis of Intoxicating Liquor.....(n.p.)	31
Annapolis Public Buildings.....(n.p.)	71
"Araunah," Seizure of.....	8c
Archives, Canadian.....	6a
Auditor General, Annual Report.....	3

B

Baie des Chaleurs Railway.....(n.p.)	86, 86a, 86b
Ballot Boxes.....	41
Banks, Chartered.....	2
Baptisms, Marriages and Burials.....(n.p.)	88
Bay of Fundy Herring Fisheries.....(n.p.)	54d
Beet-root Sugar.....(n.p.)	84
Behring Sea Seizures.....	8b
Bellechasse Election.....(n.p.)	45
Big Bay, Keppel.....(n.p.)	46
"Blizzard," Schooner.....(n.p.)	48
Board of Examiners, Civil Service.....	14b
Boisvert, George.....(n.p.)	54i
Bonds and Securities.....(n.p.)	28
Bounty on Pig Iron.....	67

B

British Canadian Loan & Investment Co.(n.p.)	56
British Columbia Penitentiary.....(n.p.)	65b
British Guiana.....	38b
Brown, Adam, Report of.....	6h
Buckingham Post Office.....(n.p.)	39a

C

Caledonia Dam.....(n.p.)	43d
Campbellton Post Office.....(n.p.)	39b
Canadian Pacific Railway—General Return..	25
do Lands sold.....	25a
Canal Statistics.....	10a
Caouette, J. B.....(n.p.)	39
Carleton Branch Railway.....(n.p.)	34
Carroll's Landing.....(n.p.)	85
Carrying Deck Loads of Timber.....	7c
Cattle Trade of Canada.....	7b
"C" Battery, British Columbia.....(n.p.)	30
Census, 1891.....	82, 82a
Chartered Banks.....	2
Civil Service Board of Examiners.....	14b
Civil Service List.....	14a
Civil Service Superannuations.....	23
Commissioner, Dominion Police.....(n.p.)	35
Commissioner, North-West Mounted Police.	19, 69
Commissions to Public Officers.....	24

C		G	
Contingent expenses of Postmasters	39c	Grand River	(n.p.) 43b, 43d
Copyright Laws	(n.p.) 81	Guysboro' and Antigonish Indians	(n.p.) 29a
Cosgrove, John	(n.p.) 36a	Guysboro', Fishery laws in	(n.p.) 54f
Cotton Sail Duck	(n.p.) 37	H	
Criminal Statistics	6g	Hartley, H. E.	(n.p.) 62
Crystal Beach	(n.p.) 85	Herring Fisheries, Bay of Fundy	(n.p.) 54d
Customs House, Montreal	(n.p.) 83	High Commissioner, Report of	6e
Customs Officers	(n.p.) 85	I	
D		Indian Affairs, Annual Report	18
Dairy Commissioner, Annual Report	6d	Indian Agent at Sutton West	(n.p.) 29
Deck Loads of Timber	7c	Indians of Guysboro', and Antigonish	(n.p.) 29a
Desmarteau, Joseph	(n.p.) 64	Inland Revenue, Annual Report	5
Disputed Territory, Ontario, Timber on	57	Insurance, Annual Report	11
Dominion Notes	(n.p.) 68	Insurance Companies	11a, 11b
Dominion Police Commissioner	(n.p.) 35	Intercolonial Railway :	(n.p.) 53 to 53c
Dredging Kaministiquia River	(n.p.) 42	Elevators constructed	(n.p.) 53
Dundas & Waterloo Macadamized Road	(n.p.) 80	Accident at St. Joseph de Lévis	(n.p.) 53a
E		Additional property accommodation	(n.p.) 53b
East Elgin Electoral District	(n.p.) 60	Enquiry held at St. Flavie	(n.p.) 53c
Election in Bellechasse	(n.p.) 45	Interior, Annual Report	17
Election Returns, 1891	27, 27a	Intoxicating Liquor	(n.p.) 31
Elevators on Intercolonial Railway	(n.p.) 53	Inverness and Richmond Railway	(n.p.) 34c
Ellis, William	(n.p.) 62c	Isle Verte	(n.p.) 39
Entire Horses	(n.p.) 72	J	
Estimates, 1891-92	1	Jamaica Exhibition	6h
Esquimalt Graving Dock	(n.p.) 40a	Johnston, Samuel	(n.p.) 73a
Expenditures and Receipts	22, 22a, 22b, 22c, 22d	Justice, Annual Report	12
Expenses, Unforeseen	21	K	
Experimental Farms, Annual Report	6c	Kaministiquia River	(n.p.) 42
Export Cattle Trade	7b	Kingston Graving Dock	(n.p.) 40, 40b, 40c
Exports and Imports	33	L	
F		Lachine Canal	(n.p.) 62e
Fisheries, Annual Report	8	Laidlow, William	(n.p.) 36b
Fisheries of Richelieu and Berthier	(n.p.) 54h	<i>Le Canada</i> Newspaper	(n.p.) 39e
Fisheries Statements and Inspectors' Reports	8a	Leduc, Charles	(n.p.) 36a
Fishery Laws, Violation of	(n.p.) 54f	Library of Parliament, Annual Report	15
Fishery Officers' Conference	(n.p.) 54d	Liquor in the North-West	(n.p.) 74
Fishery Protection Service	(n.p.) 54c	Logan's Farm, Property on	(n.p.) 64
Fishing Bounties	(n.p.) 54a, 54b	Lowe Post Office	(n.p.) 39f
do	54c	M	
Fishing Licenses	(n.p.) 54	Mackenzie Basin Territory	87
Floods by the Richelieu River	(n.p.) 43	Manchester Ship Canal	62a
Fournier, Dame Julie	(n.p.) 79	Manitoba, Separate Schools in	63, 63b
French Language in Manitoba	51	do	(n.p.) 63a
G		"Marie Eliza," Schooner	(n.p.) 77
General Election, 1891	27a	Marine, Annual Report	7
Genest, Samuel	(n.p.) 36a	Maritime Provinces and West India trade	26, 26a
Geological Survey Report	17a	Maurice, Joseph Antoine	(n.p.) 79
Gold Reserve	(n.p.) 68	"Medmerly," Barque	(n.p.) 49
Governor General's Warrants	20, 20a		
Graham, J. R.	(n.p.) 54g		
Grand Jury System	66		

M

Military Clothing.....	75a
Military District No. 1..... (n.p.)	50
Military District No. 11..... (n.p.)	30a
Militia and Defence, Annual Report.....	13
Mining Machinery..... (n.p.)	76
Miscellaneous Unforeseen Expenses.....	21
Monroe, Thomas, Report of. *	62a
Montreal Custom House..... (n.p.)	83
Morrisburg Canal..... (n.p.)	62h
Mortuary Statistics.....	6f
Munroe, Hugh, Claim of..... (n.p.)	34b
Muttart, William..... (n.p.)	73

N

Napierville and St. Rémi Railway..... (n.p.)	34d
Nicolet, Fishing licenses in..... (n.p.)	54i
North Shore Railway.....	34a
North-West, Liquor in the..... (n.p.)	74
North-West Mounted Police.....	19, 6d

O

Ottawa River.....	43c
Ouillet, Hormidas..... (n.p.)	53c

P

Pay Roll, Military Camps..... (n.p.)	75
Penitentiary, British Columbia..... (n.p.)	65b
Peterson, Captain..... (n.p.)	48
Pictou & New Glasgow, Railway between (n.p.)	70
Pig Iron, Bounty on.....	67
Point Abino..... (n.p.)	85
Postmaster General, Annual Report.....	16
Postmasters, Contingent expenses of.....	39c
Post Office at Buckingham..... (n.p.)	39a
Post Office at Campbellton..... (n.p.)	39b
Potatoes exported.....	47
Prince Edward Island Railway..... (n.p.)	55, 73
Public Accounts, Annual Report.....	1
Public Officers' Commissions.....	24
Public Printing and Stationery.....	14c
Public Works, Annual Report.....	9
Public Works Department Employees... (n.p.)	78

Q

Quebec, Bridge over St. Lawrence at.....	61
Quebec Oriental Railway..... (n.p.)	59

R

Railways and Canals, Annual Report... ..	10
Railways subsidized.....	34e
Railway Statistics.....	10b
Rapide Plat Canal..... (n.p.)	62h
Receipts and Expenditures.... 22, 22a, 22b, 22c, 22d	

R

Richelieu and Berthier fisheries..... (n.p.)	54h
Richelieu River Floods..... (n.p.)	43
Rideau Canal..... (n.p.)	62i

S

Saunders, William..... (n.p.)	73
Savings Banks..... (n.p.)	39d
Schreiber, Collingwood, Report of.....	61
Secretary of State, Annual Report.....	14
Seizure of Schooner "Araunah".....	8c
Seizures in Behring Sea.....	8b
Separate Schools, Manitoba..... 63, 63b	
do do..... (n.p.)	63a
Shareholders in Banks.....	2
Soulanges Canal..... (n.p.)	62f
do.....	62g
Spanish American Treaty.....	38c
Standard of time.....	44
Steamboat Inspection, Annual Report.....	7a
Steamer "Stanley"..... (n.p.)	58
St. Emile de Suffolk & St. André Avelin. (n.p.)	39f
St. Flavie, Enquiry held at..... (n.p.)	53c
St. Jean Deschaillons..... (n.p.)	43a
St. Joseph de Lévis, Accident at..... (n.p.)	53a
St. Vincent de Paul Penitentiary.... (n.p.)	65, 65a
Sugar Beet..... (n.p.)	84
Superannuations, Civil Service.....	23
Supplementary Estimates.....	1
Sutton West, Indian Agent at..... (n.p.)	29
Sydney, C.B., to Oxford, Train from... (n.p.)	70

T

Thurber, James..... (n.p.)	36
Timber and Deals.....	7c
Timber and Sawlogs.....	57
Time, Standard.....	44
Trade and Navigation, Annual Report... ..	4
Trade between United States and Canada. 38, 38a	

U


United States and Canadian trade.....	38, 38a
---------------------------------------	---------

V

Victoria, N.S., Returning Officer..... (n.p.)	60a
---	-----

W

Warrants, Governor General's.....	20, 20a
Weights, Measures and Gas, Annual Report. 5a	
Welland Canal..... (n.p.)	62b, 62c, 62d
Wellington, Military aid at..... (n.p.)	30
Western Hemisphere Trade.....	6b
West India trade..... 26, 26a, 38b	
Wharf at Big Bay..... (n.p.)	46

See also Alphabetical Index, page 1. 

LIST OF SESSIONAL PAPERS.

Arranged in Numerical Order, with their Titles at full length ; the Dates when Ordered and when Presented to both Houses of Parliament ; the Name of the Member who moved for each Sessional Paper, and whether it is Ordered to be Printed or Not Printed.



CONTENTS OF VOLUME No. 1.

1. Public Accounts of Canada, for the fiscal year ended 30th June, 1890 ; presented to the House of Commons, 4th May, 1891, by Hon. G. E. Foster. Estimates for the year ending 30th June, 1892 ; presented 18th May, 1891. Supplementary Estimates for the year ending 30th June, 1891 ; presented 4th June, 1891. Supplementary Estimates, 1891-32 ; presented, 16th September, 1891. Further Supplementary Estimates for the year ending 30th June, 1892 ; presented 29th September, 1891..... *Printed for both distribution and sessional papers.*
2. List of Shareholders in the Chartered Banks of the dominion of Canada, as on the 31st December, 1890. Presented to the House of Commons, 12th May, 1891, by Hon. G. E. Foster—
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME No. 2.

3. Report of the Auditor General on Appropriation Accounts, for the year ended 30th June, 1890. Presented to the House of Commons, 4th May, 1891, by Hon. G. E. Foster—
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME No. 3.

4. Tables of the Trade and Navigation of the dominion of Canada, for the fiscal year ended 30th June, 1890. Presented to the House of Commons, 5th May, 1891, by Hon. M. Bowell—
Printed for both distribution and sessional papers

CONTENTS OF VOLUME No. 4.

5. Report, Returns and Statistics of the Inland Revenues of the dominion of Canada, for the fiscal year ended 30th June, 1890. Presented to the House of Commons, 5th May, 1891, by Hon. J. Costigan..... *Printed for both distribution and sessional papers.*
- 5*a*. Inspection of Weights, Measures and Gas, being a supplement to the report of the department of inland revenue, 1890. Presented to the House of Commons, 5th May, 1891, by Hon. J. Costigan—
Printed for both distribution and sessional papers.
- 5*b*. Report on Adulteration of Food, for the fiscal year ended 30th June, 1890. Presented to the House of Commons, 1st June, 1891, by Hon. J. Costigan—
Printed for both distribution and sessional papers.
6. Report of the Minister of Agriculture for the dominion of Canada, for the calendar year 1890. Presented to the House of Commons, 5th May, 1891, by Hon. John Haggart—
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME No. 5.

- 6a. Report on Canadian Archives, 1891.....*Printed for both distribution and sessional papers.*
 6b. Report on Western Hemisphere Trade.....*Printed for both distribution and sessional papers.*
 6c. Reports of the Director and Officers of the Experimental Farms, for the year 1890. Presented to the House of Commons, 5th May, 1891, by Hon. J. Haggart—
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME No. 6.

- 6d. First Annual Report of the Dairy Commissioner for the dominion of Canada for 1890. Presented to the House of Commons, 12th May, 1891, by Hon. J. Haggart—
Printed for both distribution and sessional papers.
 6e. Report of the High Commissioner for Canada, with Reports from Agents in the United Kingdom, for the year 1890. Presented to the House of Commons, 5th May, 1891, by Hon. J. Haggart—
Printed for both distribution and sessional papers.
 6f. Mortuary Statistics of the principal cities and towns of Canada for the year 1890—
Printed for both distribution and sessional papers.
 6g. Criminal Statistics for the year ended 30th September, 1890—
Printed for both distribution and sessional papers.
 6h. Report of the Honorary Commissioner, Mr. Adam Brown, representing Canada at the Jamaica Exhibition, 1891. Presented to the House of Commons, 26th June, 1891, by Hon. J. Haggart—
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME No. 7.

7. Twenty-third Annual Report of the Department of Marine, for the fiscal year ended 30th June, 1890. Presented to the House of Commons, 4th May, 1891, by Hon. C. H. Tupper—
Printed for both distribution and sessional papers.
 7a. Report of the Chairman of the Board of Steamboat Inspection, etc., for calendar year ended 31st December, 1890. Presented to the House of Commons, 4th May, 1891, by Hon. C. H. Tupper—
Printed for both distribution and sessional papers.
 7b. Evidence on the Export Cattle Trade of Canada. Presented to the House of Commons, 4th May, 1891, by Hon. C. H. Tupper*Printed for both distribution and sessional papers.*
 7c. Report of Evidence relative to the Carrying of Deck Loads of Timber and Deals during the winter months. Presented to the House of Commons, 4th May, 1891, by Hon. C. H. Tupper—
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME No. 8.

8. Annual Report of the Department of Fisheries for the year 1890. Presented to the House of Commons, 6th May, 1891, by Hon. C. H. Tupper....*Printed for both distribution and sessional papers.*
 8a. Fisheries Statements and Inspectors' Reports for the year 1890. Presented to the House of Commons, 4th June, 1891, by Hon. J. A. Chapleau..*Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME No. 9.

- 8b. Correspondence relative to the Seizure of British Vessels in Behring Sea by United States Authorities in 1886-91.....*Printed for both distribution and sessional papers.*
 8c. Correspondence respecting the Seizure of the British schooner "Araunah," off Copper Island, by the Russian Authorities, 1888-90.....*Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME No. 10.

9. Annual Report of the Minister of Public Works, for the fiscal year 1889-90, on the works under his control. Presented to the House of Commons, 4th May, 1891, by Sir Hector Langevin—
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME No. 11.

- 10.** Annual Report of the Minister of Railways and Canals for the past fiscal year, from the 1st July, 1889, to 30th June, 1890, on the works under his control. Presented to the House of Commons, 5th May, 1891, by Sir John A. Macdonald. *Printed for both distribution and sessional papers.*
- 10a.** Canal Statistics for season of Navigation, 1890. Presented to the House of Commons, 4th June, 1891, by Hon. M. Bowell. *Printed for both distribution and sessional papers.*
- 10b.** Reports, Railway Statistics of Canada, and capital, traffic and working expenditure of the railways of the Dominion, 1890. Presented to the House of Commons, 24th June, 1891, by Hon. M. Bowell. *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME No. 12.

- 11.** Report of the Superintendent of Insurance for the year ending 31st December, 1890. Presented to the House of Commons, 10th September, 1891, by Hon. G. E. Foster—
..... *Printed for both distribution and sessional papers.*
- 11a.** Preliminary abstract of the business of Canadian Life Insurance Companies for the year ending 31st December, 1890. Presented to the House of Commons, 12th May, 1891, by Hon. G. E. Foster—
..... *Printed for both distribution and sessional papers.*
- 11b.** Abstract of statements of Insurance Companies in Canada, for the year ending 31st December, 1890. Presented to the House of Commons, 12th May, 1891, by Hon. G. E. Foster—
..... *Printed for both distribution and sessional papers.*
- 12.** Report of the Minister of Justice as to Penitentiaries in Canada, for the year ended 30th June, 1890. Presented to the House of Commons, 6th May, 1891, by Sir John Thompson—
..... *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME No. 13.

- 13.** Annual Report of the Department of Militia and Defence of the dominion of Canada, for the year ending 31st December, 1890. Presented to the House of Commons, 11th May, 1891, by Sir Adolphe Caron. *Printed for both distribution and sessional papers.*
- 14.** Report of the Secretary of State, for the year ended 31st December, 1890. Presented to the House of Commons, 5th May, 1891, by Hon. J. A. Chapleau—
..... *Printed for both distribution and sessional papers.*
- 14a.** The Civil Service List of Canada, 1890. Presented to the House of Commons, 5th May, 1891, by Hon. J. A. Chapleau. *Printed for both distribution and sessional papers.*
- 14b.** Report of the Board of Examiners for the civil service of Canada, for the year ended 31st December, 1890. Presented to the House of Commons, 5th May, 1891, by Hon. J. A. Chapleau—
..... *Printed for both distribution and sessional papers.*
- 14c.** Report of the Department of Public Printing and Stationery for the dominion of Canada, for the year ending 30th June, 1890, with a partial report for services during six months ending 31st December, 1890. Presented to the House of Commons, 4th June, 1891, by Hon. J. A. Chapleau—
..... *Printed for both distribution and sessional papers.*
- 15.** Report of the Joint Librarians of Parliament on the state of the library of parliament. Presented to the House of Commons, 30th April, 1891, by Hon. Mr. Speaker. *Printed for sessional papers only.*

CONTENTS OF VOLUME No. 14.

- 16.** Report of the Postmaster General, for the year ended 30th June, 1890. Presented to the House of Commons, 4th May, 1891, by Hon. J. Haggart. *Printed for both distribution and sessional papers.*
- 17.** Annual Report of the Department of the Interior, for the year 1890. Presented to the House of Commons, 4th May, 1891, by Hon. E. Dewdney—
..... *Printed for both distribution and sessional papers.*
- 17a.** Summary Report of the Geological Survey Department, for the year 1890. Presented to the House of Commons, 4th May, 1891, by Hon. E. Dewdney—
..... *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME No. 15.

18. Annual Report of the Department of Indian Affairs, for the year ended 31st December, 1890. Presented to the House of Commons, 4th May, 1891, by Hon. E. Dewdney.—
Printed for both distribution and sessional papers.
19. Report of the Commissioner of the North-West Mounted Police, 1890. Presented to the House of Commons, 18th May, 1891, by Sir John A. Macdonald.—
Printed for both distribution and sessional papers.
20. Statement of Governor General's Warrants issued since the closing of Parliament, and of the expenditure made on them, in accordance with the Consolidated Revenue and Audit Act. Presented to the House of Commons, 4th May, 1891, by Hon. G. E. Foster....*Printed for distribution only.*
- 20a. Return to an order of the House of Commons, dated 18th May, 1891, for a return showing details of the following items of expenditure which appear in the statement of Governor General's warrants issued since the closing of the last parliament: July 10th, 1890, franchise act, \$4,000; March 26th, 1891, Kingston graving dock, \$6,006.14; August 30th, 1890, new dredging plant, \$5,991.91; March 26th, 1891, breakwater at Southampton, \$38,022.39; April 28th, 1891, cost of litigated matters, \$10,468.79; January 31st, 1891, seed grain to settlers in N.W.T., \$2,298.18. Presented to the House of Commons, 22nd May, 1891.—*Mr. Mulock*.....*Printed for distribution only.*
21. Statement of expenditure on account of Miscellaneous Unforeseen Expenses from 1st July, 1890, to 30th April, 1891. Presented to the House of Commons, 6th May, 1891, by Sir John A. Macdonald.....*Printed for distribution only.*
22. Return to an order of the House of Commons, dated 6th May, 1891, for a return of the receipts and expenditures in detail, chargeable to the consolidated fund, from the 1st day of May, 1890, to 1st day of May, 1891; and comparative statements from 1st July, 1889, to 1st May, 1890. Presented to the House of Commons, 12th May, 1891.—*Sir R. Cartwright*.....*Printed for distribution only.*
- 22a. Return to an order of the House of Commons, dated 15th May, 1891, for a return giving comparative statement of receipts and expenditures from 1st July, 1890, to 10th May, 1891, and from 1st July, 1889, to 10th May, 1890. Presented to the House of Commons, 18th May, 1891.—*Sir R. Cartwright*.....*Printed for distribution only.*
- 22b. Statement of receipts and expenditures, in detail, chargeable to the consolidated fund, from 1st July, 1889, to 20th May, 1890; and like statement from 1st July, 1890, to 20th May, 1891. Presented to the House of Commons, 22nd May, 1891, by Hon. G. E. Foster.....*Printed for distribution only.*
- 22c. Statement of receipts and expenditures, in detail, chargeable to the consolidated fund, from 1st July, 1889, to 31st May, 1890; and like statement from 1st July, 1890, to 31st May, 1891. Presented to the House of Commons, 1st June, 1891, by Hon. G. E. Foster.....*Printed for distribution only.*
- 22d. Statement of receipts and expenditures, in detail, chargeable to the consolidated fund, from 1st July, 1889, to the 10th June, 1890; and like statement from 1st July, 1890, to 10th June, 1891. Presented to the House of Commons, 17th June, 1891, by Hon. G. E. Foster.—
Printed for distribution only.

CONTENTS OF VOLUME No. 16.

23. Statement of all superannuations and retiring allowances in the civil service, giving the name and rank of each person superannuated or retired, his salary, age and length of service, his allowance and cause of retirement, whether the vacancy has been filled by promotion or new appointment, etc., for year ended 31st December, 1890. Presented to the House of Commons, 11th May, 1891, by Hon. G. E. Foster.....*Printed for sessional papers only.*
24. List of public officers to whom commissions have issued under chapter 19 of the Revised Statutes of Canada, during the year 1890. Presented to the House of Commons, 12th May, 1891, by Hon. J. A. Chapleau.....*Printed in No. 14.*
25. Return (*in part*) under resolution of the House of Commons, passed on the 20th February, 1882, on all subjects affecting the Canadian Pacific Railway, respecting details as to: 1. Selection of the route. 2. The progress of the work. 3. The selection or reservation of land. 4. The payment of moneys. 5. The laying out of branches. 6. The progress thereon. 7. The rates of tolls for passengers and freight. 8. The particulars required by the Consolidated Railway Act and amendments thereto, up to the end of the previous fiscal year. 9. Like particulars up to the latest practicable date before the presentation of the return. 10. Copies of all orders in council and all

- correspondence between the government and the railway company, or any member or officer of either, relating to the affairs of the company. Presented to the House of Commons, 14th May, 1891, by Hon. E. Dewdney *Printed for sessional papers only.*
- 25a.** List of lands sold by the Canadian Pacific Railway Company, from the 1st October, 1889, to 1st October, 1890. Presented to the House of Commons, 27th May, 1891, by Hon. E. Dewdney—
..... *Printed for sessional papers only.*
- 26.** Return to an order of the House of Commons, dated 14th May, 1891, for an abstract copy or copies of the cargoes carried by the steamships subsidized to run between the maritime provinces and the West Indies on each voyage during the present year 1891; showing the character and value of the cargoes carried and the port or ports of lading and discharge of such cargoes, with an abstract of any other information given in such manifest; and also showing number of trips made by the steamers subsidized to carry on the steam service between the maritime provinces and the West India ports, during the year 1890; the dates of such trips, amount paid for each trip, the person or company carrying out said service for the present year, and whether any contract has been entered into for the service this year, and what rates are being paid therefor and to whom. Presented to the House of Commons, 18th May, 1891—*Mr. Davies*. *Printed for sessional papers only.*
- 26a.** Return to an address of the House of Commons, to his excellency the Governor General of the 27th May, 1891, for: 1. Copies of all correspondence and reports to council on the subject of payment of subsidies to the Canadian, West Indian and South American Steamship Company, and to Messrs. Pickford and Black, or either of them, and for copies of all contracts between the Canadian, West Indian and South American Steamship Company (Limited), and Messrs. Pickford and Black, or either of them, and the government, for the steam service between Canada and the West Indies, entered into during the year 1890. 2. Also the names of persons or companies to whom the subsidies for the steam service between St. John, N.B., and the West Indies were paid, previously to the execution of the contract by the Canadian, West Indian and South American Steamship Company, and the amounts so paid, and dates. Also the amount paid, and dates when paid to such steamship company, after entering into the contract. Presented to the House of Commons, 13th July, 1891—*Mr. Davies* *Printed for sessional papers only.*
- 27.** Return to an Order of the House of Commons, dated the 6th May, 1891, for a return giving the date of the declarations in every riding during the recent general election. If adjournments or enlargements were made, in any case, from the time fixed at the nominations, stating where, when, how often and for what reason, and giving the name and address of the returning officer where such occurred; also giving the name, occupation and post office address of every returning officer; showing the date of return by returning officer to the clerk of the crown in chancery, and the date of receipt of each by the clerk of the crown in chancery; together with the name of the electoral district and the member elected thereto, and the date of publication of his return in the *Canada Gazette*. Also copies of all letters written by or on behalf of any member of the government to any member elect or to any other person or persons suggesting that any returning officer be asked to delay making his return to the clerk of the crown in chancery. Presented to the House of Commons, 19th May, 1891.—*Mr. Landerkin* *Printed for sessional papers only.*
- 27a.** Return of the Seventh General Election for the House of Commons of Canada, by Samuel E. St. O. Chapleau, Esq., Clerk of the Crown in Chancery for Canada. Presented to the House of Commons, 19th May, 1891, by Hon. J. A. Chapleau. *Printed for both distribution and sessional papers.*
- 28.** Detailed statement of all bonds and securities registered in the department of the secretary of state of Canada, since last return, 1890, submitted to the parliament of Canada under section 23, chapter 19, of the Revised Statutes of Canada. Presented to the House of Commons, 20th May, 1891, by Hon. J. A. Chapleau *Not printed.*
- 29.** Return to an order of the House of Commons, dated 11th May, 1891, for a return showing a detailed account of all expenses incurred in connection with an investigation held into the conduct of the indian agent at Sutton West. Presented to the House of Commons, 21st May, 1891.—*Mr. Mulock* *Not printed.*
- 29a.** Return to an order of the House of Commons, dated 18th May, 1891, for a list and prices paid for all articles purchased for the indians of the counties of Guysboro' and Antigonish, including in said list any cattle purchased as well as farming implements, during the last three years. Also statement of prices realized from sale of cattle or other articles purchased for the use of the indians in said counties. Also statement in full of articles belonging to the department of the interior in said counties for the use of the said indians. Presented to the House of Commons, 27th May, 1891.—*Mr. Fraser* *Not printed.*

- 30.** Return to an address of the House of Commons to his excellency the Governor General, dated 11th May, 1891, for a return of : 1. Copies of all correspondence and telegrams between the department of militia and defence, or any officer thereof, and the commander of "C" battery, having reference to sending a detachment of men under his command to Wellington on the 4th or 5th day of August last, ostensibly to aid the civil authorities of that district. 2. Also copies of the requisition served on the said commanding officer, invoking military aid at Wellington, together with the names of the magistrates who signed the requisition, also the distance from Wellington at which said magistrates reside. 3. Also copies of the reports of the commanding officer, confidential or otherwise, as to the necessity there was for the military occupation of Wellington, and for their continuance there, until they were recalled. 4. Also of all telegraphic or other correspondence between the department of militia and defence, or any officer of the government of Canada, and the provincial government of British Columbia, or with any officer thereof, if any, or with any other person, in reference to sending the said military force to Wellington. 5. Also a detailed statement of all moneys disbursed by the government of Canada, or by any department thereof, either as regimental pay, or for active service allowance, either to the officers and men of "C" battery, or both officers and men of the British Columbia Garrison Artillery, while on service at Wellington, or for their maintenance while there, or for their transportation to and from Wellington. 6. Also copies of all militia general and special orders issued by the militia department for the regulation and guidance of the officers of "C" battery since its establishment in British Columbia. Presented to the House of Commons, 22nd May, 1891.—*Mr. Gordon*—*Not printed.*
- 30a.** Return to an order of the House of Commons dated 3rd June, 1891, for a return of all reports from the deputy adjutant general of military district No. 11 to the minister of militia, since January, 1888 : 1. In regard to "C" battery barracks. 2. In regard to drill hall in Victoria. 3. In regard to removal of magazine from Beacon Hill Park. 4. In regard to condition of guns, stores, gun platforms, etc. Also copies of all correspondence between the deputy adjutant general of military district No. 11 and the minister of militia, on the same subjects, since the same date. Presented to the House of Commons, 1st July, 1891.—*Mr. Prior*.....*Not printed.*
- 31.** Return to an address of the House of Commons, to his excellency the Governor General, dated 14th May, 1891, for a return of all petitions addressed to the government, praying for the analysis of intoxicating liquor manufactured or offered for sale, by wholesale or retail, in the dominion of Canada. Presented to the House of Commons, 22nd May, 1891.—*Mr. Curran*.*Not printed.*
- 32.** Return to an order of the House of Commons, dated 14th May, 1891, for copies of correspondence, papers, and all documents respecting steps taken by the government during last session, or since that time, to prevent American cheese being shipped through or from Canadian ports, and branded as Canadian ; also copies of the instructions now given to the proper authorities or preventive officers on the subject. Presented to the House of Commons, 26th May, 1891.—*Mr. Marshall*—*Not printed.*
- 33.** Return to an order of the House of Commons, dated 6th May, 1891, for a return in the form used in the statements usually published in the *Gazette* of the exports and imports from 1st day of May, 1890, to 1st day of May, 1891, distinguishing the products of Canada and those of other countries ; and comparative statements from 1st July, 1889, to 1st May, 1890. Presented to the House of Commons, 27th May, 1891.—*Sir R. Cartwright*.*Printed for distribution only.*
- 34.** Copies of papers relating to the sale of the Carleton Branch Railway to the city of St. John. Presented to the House of Commons, 29th May, 1891, by Hon. G. E. Foster*Not printed.*
- 34a.** Return to an address of the House of Commons to his excellency the Governor General, dated 18th June, 1891, for copies of all orders in council, correspondence, papers, reports and documents in relation to the returning of the debentures of the North Shore Railway Company. Presented to the House of Commons, 10th August, 1891.—*Mr. Langelier*.....*Printed for sessional papers only.*
- 34b.** Return to an order of the House of Commons, dated 20th July, 1891, for all papers in reference to the claim of Hugh Munroe, of River John, Pictou County, for damages for injuries caused to his farm by the building of the Short Line Railway. Presented to the House of Commons, 10th August, 1891.—*Mr. Fraser*.....*Not printed.*
- 34c.** Return to an address of the House of Commons to his excellency the Governor General, dated 20th July, 1891, for copies of all correspondence, petitions and memorials relating to the construction of a line of railway by the Inverness and Richmond Railway Company (Limited), in the county of Inverness, up to date. Presented to the House of Commons, 10th August, 1891. *Mr. Cameron (Inverness)*.....*Not printed.*

- 34d.** Return to an address of the House of Commons to his excellency the Governor General, dated 20th July, 1891, for copies of all petitions, letters or communications whatsoever received by the government from any of the municipalities of the county of Napierville, or from any person in the said county, and of any answers made by the government thereto, up to the 5th March last, in relation to the granting of a subsidy in aid of the construction of a railway between the village of Napierville and the village of St. Rémi. Presented to the House of Commons, 10th August, 1891.—*Mr. Monet*.....*Not printed.*
- 34c.** Return to an order of the House of Commons, dated the 18th June, 1891, for a return showing :
 1. The names of the several railways in the dominion to which dominion aid has been granted, except the Canadian Pacific main line 2. The province within which the said railway, in whole or in part, is located, and if located in two or more provinces, the number of miles in each. 3. The county or counties through which the said lines run in each province. 4. The amount of money paid to each up to the 1st January, 1891. 5. The railways built in the dominion by the dominion since confederation, excepting the main line of the Intercolonial and main line of the Canadian Pacific. 6. The province within which built. 7. The entire cost of each line built or assisted by the dominion, in each province, including equipment. 8. The entire sum spent up to 1st January last, on the construction of dominion roads in each province, excepting the Intercolonial main line and Canadian Pacific main line. Presented to the House of Commons, 14th September, 1891.—*Mr. McMullen*.....*Printed for sessional papers only.*
- 35.** Report of the Commissioner, Dominion Police, for the year 1890, under Revised Statutes of Canada, chapter 184, section 5. Presented to the House of Commons, 1st June, 1891, by Sir John Thompson.....*Not printed.*
- 36.** Return to an address of the House of Commons to his excellency the Governor General, dated 12th May, 1891, for copies of all orders in council, letters, correspondence, and documents of every nature respecting the resignation of James Thurber, Esq., lieutenant-colonel of the sedentary militia, in the county of Lotbinière; the appointment of his son, Mr. William Thurber, as light-house keeper in the parish of St. Croix; and the refusal of the government to grant to the said James Thurber, Esq., the amount claimed by him as his superannuation allowance. Presented to the House of Commons, 1st June, 1891.—*Mr. Rinfret*.....*Not printed.*
- 36a.** Return to an order of the House of Commons, dated 11th May, 1891, for all correspondence and papers relating to the resignations and re-appointments to office of the following parties: Samuel Genest, John Cosgrove and Charles Leduc. Presented to the House of Commons, 4th June, 1891.—*Mr. Devlin*.....*Not printed.*
- 36b.** Return to an order of the House of Commons, dated 18th June, 1891, for a return of all letters, correspondence and papers relating to the cause of the resignation and removal of William Laidlow, of Arthur, from the North-West Mounted Police, and all papers and correspondence relating to his application for compensation for the loss of his thumb while in the service; also the award of compensation paid him, if any. Presented to the House of Commons, 6th July, 1891.—*Mr. McMullen*.....*Not printed.*
- 37.** Return to an order of the House of Commons, dated 12th May, 1891, for a return showing how many yards of cotton sail duck have been imported at Halifax, Nova Scotia, from the 30th June, 1889, to 30th June, 1890, and from 30th June, 1890, to 30th December, 1890, and the value of such importation respectively. Presented to the House of Commons, 2nd June, 1891.—*Mr. White (Shelburne)*.....*Not printed.*

CONTENTS OF VOLUME No. 17.

- 38.** Papers relating to the extension and development of trade between the United States and the dominion of Canada, including the colony of Newfoundland. Presented to the House of Commons, 3rd June, 1891, by Sir John Thompson.....*Printed for both distribution and sessional papers.*
- 38a.** Further papers relating to the extension and development of trade between the United States and dominion of Canada, including the colony of Newfoundland. Presented to the House of Commons, 22nd June, 1891, by Sir John Thompson.....*Printed for both distribution and sessional papers.*
- 38b.** Copy of a report of the honourable the privy council of the 4th November, 1890, relative to the proposal made by the government of Canada to the governors of British West India Islands and of British Guiana for the extension of trade, together with correspondence, etc., referring to the same subject. Presented to the House of Commons, 29th July, 1891, by Hon. G. E. Foster—
Printed for both distribution and sessional papers.

- 38c.** Correspondence and telegrams respecting the Spanish American Treaty. Presented to the House of Commons, 22nd September, 1891, by Hon. G. E. Foster. *Printed for sessional papers only.*
- 39.** Return to an order of the House of Commons, dated 27th May, 1891, for copies of the report of the enquiry held by J. B. Caouette, in 1890, respecting the abstraction, from the post office at Isle Verte, of a newspaper addressed to a resident of that parish; of all letters from the post office department to the said Caouette, and replies thereto, and of any report made by the said Caouette; also of all official correspondence in relation to the said enquiry. Presented to the House of Commons, 16th June, 1891.—*Mr. Amyot*. *Not printed.*
- 39a.** Return to an order of the House of Commons, dated 18th May, 1891, for copies of all letters, petitions and memorials relating to and praying for the construction of a suitable post office in the town of Buckingham, county of Ottawa. Presented to the House of Commons, 16th June, 1891.—*Mr. Devlin*. *Not printed.*
- 39b.** Return to an address of the House of Commons to his excellency the Governor General, dated 27th May, 1891, for copies of all petitions, memorials, reports and orders in council in reference to the establishment of a post office at Campbellton, in the county of Inverness, Nova Scotia. Presented to the House of Commons, 19th June, 1891.—*Mr. Laurier*. *Not printed.*
- 39c.** Return to an order of the House of Commons, dated 5th May, 1891, for a return showing the contingent expenses of the several salaried postmasters of the dominion for the fiscal years 1888, 1889 and 1890. Presented to the House of Commons, 24th July, 1891.—*Mr. McMullen*—
Printed for sessional papers only.
- 39d.** Return to an order of the House of Commons, dated 15th May, 1891, for a return showing the amount deposited in each of the post office and dominion savings banks in the dominion on the 30th June, 1891. Presented to the House of Commons, 12th August, 1891.—*Mr. McMullen*—
Not printed.
- 39e.** Return to an order of the House of Commons, dated 20th July, 1891, for copies of correspondence between the proprietor or proprietors of the newspaper *Le Canada*, published at Ottawa, and any member of the government; also of any correspondence between any member of the government and any other person in relation to the suspension of the publication in the said newspaper *Le Canada*, of the table showing the arrival and departure of mails at the Ottawa post office. Presented to the House of Commons, 12th August, 1891.—*Mr. Beausoleil*. *Not printed.*
- 39f.** Return to an order of the House of Commons, dated 18th May, 1891, for copies of all letters, correspondence and petitions relating to the establishment of a post office in the township of Lowe, county of Ottawa; also petitions, memorials and documents complaining of the mail service between Ste. Emile de Suffolk and St. André Avelin, in the county of Ottawa. Presented to the House of Commons, 17th August, 1891.—*Mr. Devlin*. *Not printed.*
- 40.** Return to an order of the House of Commons, dated 5th May, 1891, for copies of the tenders asked for to construct a graving dock at Kingston; the tenders received; the reports and calculations made by the engineers of the department of public works made and based on these tenders; the contract which has been entered into; the reports of the engineers which may have been made on the carrying out of the works; or the changes which may have been made in them; and also a statement of the sums paid out to the contractors up to date. Presented to the House of Commons, 4th June, 1891.—*Mr. Guay*. *Not printed.*
- 40a.** Return to an order of the House of Commons, dated 8th July, 1891, for copies of the tenders received and accepted for the construction of a caisson in connection with the Esquimaux graving dock; the report of Mr. H. F. Perley in this connection; and all other correspondence referring to this contract. Presented to the House of Commons, 4th August, 1891.—*Mr. Tarte*. *Not printed.*
- 40b.** Papers respecting the Kingston graving dock. Presented to the House of Commons, 6th July, 1891, by Sir Hector Langevin. *Not printed.*
- 40c.** Return to an address of the House of Commons to his excellency the Governor General, dated 1st July, 1891, for : 1. Copy of original plan and also of alteration made to Kingston dry dock, showing the additional excavations, crib work, extra masonry and additional iron works in caissons, together with the quantities of each class of extra work paid or undertaken to be paid for, and the rates of payment for the said extra work. 2. Copy of the order in council, dated 5th July, 1890, concerning the contract for the building of said dry dock. Presented to the House of Commons, 19th August, 1891.—*Mr. Amyot*. *Not printed.*
- 40d.** Return to an order of the House of Commons, dated 3rd August, 1891, for copies of all petitions, correspondence, reports of surveys and any other documents relating to the construction of a dry

- dock at the town of Amherstburg. Presented to the House of Commons, 20th August, 1891.—*Mr. Allan*.....*Not printed.*
41. Return to an order of the House of Commons, dated 14th May, 1891, for a return giving the report of Mr. J. R. Arnoldi, engineer of the mechanical department of public works, to the special committee on balloon boxes last session. Presented to the House of Commons, 4th June, 1891.—*Mr. Landerkin*.....*Printed for sessional papers only.*
42. Return to an order of the House of Commons, dated 11th May, 1891, for a return of all papers, correspondence and other documents relating to the dredging on the bar of the Kaministiquia River, Thunder Bay, since July, 1890, including the advertisement, tenders received and contract for such dredging; also engineer's report to the department, showing what progress has been made in the work up to the 1st of December last; also statement showing the amounts paid on account of such work, to whom paid, dates and amounts of such payments. Presented to the House of Commons, 4th June, 1891.—*Mr. Campbell*.....*Not printed.*
43. Return to an order of the House of Commons, dated 5th May, 1891, for copy of the report of H. F. Perley, Esq., chief engineer of the public works department, respecting the causes of the flooding by the waters of the Richelieu River, of the lands of the riparian owners, in the counties of Iberville, St. John and Missisquoi. Presented to the House of Commons, 4th June, 1891.—*Mr. Béchard*.....*Not printed.*
- 43a. Return to an order of the House of Commons, dated 18th June, 1891, for copies of all correspondence, letters, reports and documents of every description, respecting the deepening of the river and the lifting and removal of boulders from the batture of St. Jean Deschaillons. Presented to the House of Commons, 22nd July, 1891.—*Mr. Rinfret*.....*Not printed.*
- 43b. Return to an order of the House of Commons, dated 13th July, 1891, for copies of reports of engineers as to improvements in the navigation of the Grand River. Presented to the House of Commons, 4th August, 1891.—*Mr. Montague*.....*Not printed.*
- 43c. Supplementary return to an address of the Senate to his excellency the Governor General, dated 21st January, 1890, for copies of all reports and other communications in reference to the deposit of sawdust, slabs and other offensive material in the Ottawa and other rivers of the dominion, together with a letter from the deputy minister of fisheries relative thereto. Presented to the Senate, 19th August, 1891.—*Hon. Mr. Clemow*.....*Printed for sessional papers only.*
- 43d. Return to an order of the House of Commons, dated 3rd August, 1891, for copies of petitions, correspondence, etc., relating to reconstruction, by private parties, of the Caledonia Dam, across the Grand River. Presented to the House of Commons, 14th September, 1891.—*Mr. Montague*—
Not printed.
44. Return to an order of the House of Commons, dated 15th May, 1891, for copies of all letters, communications, and reports in the possession of the government, relating to the fixing of a standard of time and the legalization thereof. Presented to the House of Commons, 4th June, 1891.—*Mr. Kirkpatrick*.....*Printed for both distribution and sessional papers.*
45. Return to an order of the House of Commons, dated 13th May, 1891, for copies of all letters and correspondence between the government or any member thereof, or any public department, and Mr. Solyme Forgues, of St. Michel de Bellechasse, returning officer, in relation to the last dominion election in the electoral district of Bellechasse. Presented to the House of Commons, 4th June, 1891.—*Mr. Amyot*.....*Not printed.*
46. Return to an order of the House of Commons, dated 18th May, 1891, for a return showing what amount of money was expended in repairing wharf at Big Bay, in the township of Keppel, North Grey, during the summer of 1890; whether the work was let by tender or private contract; who performed the work; who acted as inspector, and what compensation did the inspector receive. Presented to the House of Commons, 4th June, 1891.—*Mr. Somerville*.....*Not printed.*
47. Return to an order of the House of Commons, dated 27th May, 1891, for a return showing the number of bushels of potatoes exported from Canada from 1st October, 1890, to 1st May, 1891, and the place to which exported. Presented to the House of Commons, 6th June, 1891.—*Mr. McMullen*—
Printed for sessional papers only.
48. Return to an order of the House of Commons, dated 3rd June, 1891, for a return of all correspondence between all persons and the department of marine and fisheries, recommending or with reference to a reward given to Captain Peterson of the American schooner "Seigfried," for his services in rescuing the captain and crew of the schooner "Blizzard," of Lunenburg, in October last. Presented to the House of Commons, 16th June, 1891.—*Mr. Flint*.....*Not printed.*

49. Return to an order of the House of Commons, dated 3rd June, 1891, for correspondence with the department of marine respecting presentation of binocular glasses to the volunteers rescuing the crew of the barque "Medmerly," lost on Ray's Island, Pictou County, in November last past. Presented to the House of Commons, 16th June, 1891.—*Mr. Fraser*..... *Not printed.*
50. Return to an order of the House of Commons, dated 18th May, 1891, for copy of all correspondence, papers and reports, in the possession of the government, relating to the locality for holding the camp of militia district No. 1, for the years 1890 and 1891. Presented to the House of Commons, 16th June, 1891.—*Mr. Hyman*..... *Not printed.*
51. Return to an address of the House of Commons to his excellency the Governor General, dated 5th May, 1891, for copies of all correspondence, petitions, memorials and any other documents submitted to the privy council, in connection with the abolition of the official use of the French language in the province of Manitoba by the legislature of that province; also copies of reports to, or orders in council thereon; also copies of the act or acts relating thereto. Presented to the House of Commons, 18th June, 1891.—*Mr. LaRivière*..... *Printed for both distribution and sessional papers.*
52. Return to an address of the House of Commons to his excellency the Governor General, dated 5th May, 1891, for copies of the order in council of date the 10th May, 1888, granting a subsidy of \$12,500 per annum to Mr. Julien Chabot, for the use of the steamboat "Admiral," between Dalhousie and Gaspé, in connection with the Intercolonial Railway; and also of all other orders in council which may have been passed afterwards in respect to the same steamboat. Presented to the House of Commons, 19th June, 1891.—*Mr. Guay*..... *Not printed.*
- 52a. Return to an order of the House of Commons, dated 5th May, 1891, for copies of the contract with the owners or owner, or the party in possession of the steamboat "Admiral," made by the government in consequence of an order in council bearing date the 10th May, 1888; also of the contracts, deeds or transfers which may have been executed or notified to the government, since the said date of the 10th of May, 1888; also a statement of the sums paid out for the use of the said steamboat; the names of the persons to whom these sums have been paid; and the date of the payments and of the receipts which have been given therefor. Presented to the House of Commons, 24th June, 1891.—*Mr. Guay*..... *Not printed.*
- 52b. Return to an address of the House of Commons to his excellency the Governor General, dated 13th July, 1891, for copies of any order or orders in council, adopted between the years 1883 and 1888, in relation to the steamer "Admiral" and the service performed by the said steamer between Dalhousie and Gaspé or other points, in connection with the Intercolonial Railway. Presented to the House of Commons, 10th August, 1891.—*Mr. Tarte*..... *Not printed.*
- 52c. Return to an address of the House of Commons to his excellency the Governor General, dated 13th July, 1891, for copies of the contract or contracts between the owners or owner or person in possession of the steamer "Admiral" and the government, between the years 1883 and 1888; also copies of all deeds of transfer, etc., filed with the government, in respect of the said steamer; also a statement of all sums paid during the said period of time for the service of the said steamer, with the names of the persons to whom the said sums were paid and the dates of such payments. Presented to the House of Commons, 10th August, 1891.—*Mr. Tarte*..... *Not printed.*
53. Return to an order of the House of Commons, dated 6th May, 1891, for a return showing the cost of construction of the several elevators built on the Intercolonial Railway and branches; showing where erected and the capacity of each; the date of erection, and the quantity of grain that passed through each of them, each year, since their completion. Presented to the House of Commons, 19th June, 1891.—*Mr. McMullen*..... *Not printed.*
- 53a. Return to an order of the House of Commons, dated 13th May, 1891, for copies of all letters, documents, etc., between the officials of the Intercolonial Railway at Moncton and the department of railways in relation to the accident at St. Joseph de Lévis, on the 18th December, 1890. Presented to the House of Commons, 19th June, 1891.—*Mr. Carroll*..... *Not printed.*
- 53b. Return to an order of the House of Commons, dated 1st July, 1891, for all correspondence, telegrams, letters, reports and other papers relating to the proposed "additional property accommodation" of Intercolonial Railway at St. John, N.B. Presented to the House of Commons, 12th August, 1891.—*Mr. Davies*..... *Not printed.*
- 53c. Return to an order of the House of Commons, dated 8th July, 1891, for copies of all paper writings, documents, depositions, etc., respecting or in connection with the enquiry held at St. Flavie, on the line of the Intercolonial Railway, into the conduct of Mr. Hormidas Ouillet, superintendent

of the workshops of the said Intercolonial Railway, as well as in relation to any other employees. Presented to the House of Commons, 26th September, 1891.—*Mr. Choquette*.....*Not printed.*

54. Return to an order of the House of Commons, dated 11th May, 1891, for : 1. A statement of all fishing licenses granted in 1890, in the following counties : Berthier, Maskinongé, St. Maurice, Champlain, Nicolet, Yamaska and Richelieu, showing the names of those who obtained such licenses, the amount paid by each of them and the date of each payment. 2. A statement of the quantity and value of the several kinds of fish taken by the said license-holders, according to the reports of the fishery overseers for the said counties. 3. Copies of all instructions sent to the fishery overseers of the said several counties in 1890 and 1891, up to date. 4. Copies of all letters, petitions and complaints received in relation to this subject during the years 1890 and 1891, up to this date, and of all replies made thereto. 5. For a statement of the salaries of the fishery overseers of the said counties, and of all other costs and expenditure incurred by the government in connection with the fisheries of the counties aforesaid, during the year 1890. Presented to the House of Commons, 22nd June, 1891.....*Not printed.*
- 54a. Return to an order of the House of Commons, dated 3rd June, 1891, for a return showing the names of all persons in the county of Queen's, Nova Scotia, to whom fishing bounties have been paid during the last five years, with the amount paid each, and the dates of payment ; the amount still unpaid, with the names of the persons to whom such bounties are still due. Presented to the House of Commons, 23rd June, 1891.—*Mr. Forbes*.....*Not printed.*
- 54b. Return to an order of the House of Commons, dated 18th May, 1891, for a return of the names of all persons in the county of Guysboro' to whom fishing bounties have been paid during the last three years, with the amount paid each, the amount still unpaid with the names of the persons to whom such bounties are still due. Presented to the House of Commons, 23rd June, 1891.—*Mr. Fraser*—*Not printed.*
- 54c. Return to an order of the House of Commons, dated 27th May, 1891, for a return showing the amount paid for the supplies required by the crews of the several government vessels engaged in the fishery protection service, in the province of Ontario, for the fiscal year ending 30th June, 1890, together with the names of parties from whom purchases were made, and the prices paid. Presented to the House of Commons, 24th June, 1891.—*Mr. Somerville*.....*Not printed.*
- 54d. Return to an order of the House of Commons, dated 3rd June, 1891, for a return of papers, correspondence, reports and other documents in the possession of the government relating to the subject of the herring fisheries of the Bay of Fundy and its adjacent waters during the past year, including the report of the conference of fishery officers held at Ottawa on the subject. Presented to the House of Commons, 30th June, 1891.—*Mr. Bowers*.....*Not printed.*
- 54e. Return to an order of the House of Commons, dated 13th May, 1891, for a return of the costs and expenses of adjusting the amounts claimed for fishery bounties and of preparing and distributing the fishery bounty cheques in each year since 1883, and also the names of the persons authorized to distribute the bounty cheques in the province of Nova Scotia during the years 1889, 1890 and 1891. Presented to the House of Commons, 16th July, 1891.—*Mr. Flint*—
Printed for sessional papers only.
- 54f. Return to an order of the House of Commons, dated 13th May, 1891, for a return giving the names of all persons in the county of Guysboro' fined for violation of the fishery laws, since the 1st day of January, 1890 ; the amount of each fine and costs ; the sum collected of each ; the names of the parties whose fines have been remitted, with the reason for such remission ; the names of parties in said county against whom fines are still outstanding, with the amount of each and costs. Presented to the House of Commons, 22nd June, 1891.—*Mr. Fraser*.....*Not printed.*
- 54g. Return to an address of the House of Commons to his excellency the Governor General, dated 15th May, 1891, for a return of all papers, letters and documents in any way whatever relating to the dispensing with the services of J. R. Graham, of Fenelon Falls, as fishery inspector or overseer within the county of Victoria, and of all communications with or representations to the government, or any member thereof, or any officer or clerk in the department of marine and fisheries, relating to the said J. R. Graham and the performance of his duties prior to dispensing with his services ; and of all new rules or regulations (if any) for the appointment of fishery inspectors in said county and the performance of their duties. Presented to the House of Commons, 3rd August, 1891.—*Mr. Barron*.....*Not printed.*
- 54h. Return to an address of the Senate to his excellency the Governor General, dated 30th April, 1890, for copies of all departmental orders relating to the fisheries of the counties of Richelieu and Ber-

thier, and a copy of all correspondence had since 1887 between the department of fisheries and the fishery officers of the said counties on this subject. Presented to the Senate, 14th July, 1891.—*Hon. Mr. Guévremont*.....*Not printed.*

- 54i.** Return to an order of the House of Commons, dated 27th July, 1891, for copies of all correspondence connected with the appointment of George Boisvert as fishery officer over that portion of the River St. Lawrence along the front of the county of Nicolet. Also for copies of all correspondence connected with the issuing of fishing licenses for the county of Nicolet between Fabien Boisvert, at that time member of the House of Commons of Canada, or any other persons, and the government. Presented to the House of Commons, 21st August, 1891.—*Mr. Leduc*.....*Not printed.*
- 55.** Return to an order of the House of Commons, dated 18th May, 1891, for a return for the years 1889 and 1890 of all reports from or correspondence with the superintendent of the Prince Edward Island Railway, with respect to the condition of the road-bed or the rails of such railway, together with any reports or representations made with respect to such road-bed or rails by any of the track masters or other officers of said road. 2. Showing what portion in mileage of such road-bed has been relaid with steel rails since the completion of such road. Presented to the House of Commons, 2nd July, 1891.—*Mr. Davies*.....*Not printed.*
- 56.** Statement of the affairs of the British Canadian Loan and Investment Company, for the year ended 31st December, 1890; also a list of shareholders on 31st December, 1890. Presented to the Senate, 4th May, 1891, by the Hon. the Speaker.....*Not printed.*
- 57.** Return to an order of the House of Commons, dated 5th May, 1891, for a return showing the quantities and kinds of timber and sawlogs cut annually in the lately disputed territory, in the province of Ontario, under the authority of timber licenses issued by the government of Canada; the names of such licensees; and showing also how the dues were imposed, and the amount per thousand feet, board measure, realized by the government of Canada from each person or firm so licensed in each year from 1875 to 1887, inclusive; or what royalty or other revenue was received by the government from licensees aforesaid on such quantities cut or sold. Presented to the House of Commons, 6th July, 1891.—*Mr. Barron*.....*Printed for sessional papers only.*
- 58.** Return to an order of the House of Commons, dated 12th May, 1891, for a return giving the date at which the steamer "Stanley" commenced running between Prince Edward Island and the mainland in the fall of 1890, how many trips made, date of each trip, the number of passengers and the amount of freight taken to and from Prince Edward Island; the amount of money collected on account of passengers and the amount for freight; also the expenses of working said steamer during the winter of 1891, and the date at which said steamer stopped running from Prince Edward Island to the mainland; together with the report of the deputy minister, dated 5th March, 1891, touching this steamer, and all correspondence, telegrams and representations made to the marine and post office departments touching the mail and steamboat service between the island and the mainland. Presented to the House of Commons, 13th July, 1891.—*Mr. Perry*—*Not printed.*
- 59.** Return to an address of the House of Commons to his excellency the Governor General, dated 8th July, 1891, for copies of all petitions, correspondence and documents whatsoever, respecting the grant of a subsidy to the Quebec Oriental Railway. Presented to the House of Commons, 20th July, 1891.—*Mr. Vaillancourt*.....*Not printed.*
- 60.** Return to an order of the House of Commons, dated 1st July, 1891, for copies of all correspondence, letters or telegrams addressed to the auditor general with reference to the payment of accounts as rendered to the auditor general by the returning officer of the electoral district of the east riding of Elgin; also the names and post office addresses of the returning officer, deputy returning officers, poll clerks and constables for the electoral district of the east riding of Elgin; also the respective amounts as claimed by each; the amount actually paid to each up to date, including amount of balance, if any, as rendered by the returning officer in his original account to the auditor general. Presented to the House of Commons, 14th July, 1891.—*Mr. Ingram*—*Not printed.*
- 60a.** Return to an address of the House of Commons, to his excellency the Governor General, dated 27th July, 1891, for copy of all correspondence between John A. Macdonald, M. P. (Victoria, N. S.), or any other parties in the county of Victoria, N. S., and the government, or any department or official of the government, previous to the late general elections, in reference to the appointment of a returning officer at said elections for said county. Presented to the House of Commons, 3rd August, 1891.—*Mr. Flint*.....*Not printed.*

- 61.** Return to an order of the House of Commons, dated 18th June, 1891, for copy of the report of Collingwood Schreiber, Esq., upon survey made by him of the river St. Lawrence immediately opposite and in the vicinity of the city of Quebec, for the purpose of ascertaining whether it was possible to build a railway bridge there. Presented to the House of Commons, 14th July, 1891.—*Mr. Laurier*.*Printed for both distribution and sessional papers.*
- 62.** Return to an address of the House of Commons to his excellency the Governor General, dated 11th May, 1891, for all correspondence between any department of the government and H. E. Hartley, late lockmaster on the Carillon and Grenville Canal, in reference to his retirement from the civil service, and any report to council or order in council upon the same subject, together with all papers connected with the dismissal of Mr. Hartley. Presented to the House of Commons, 26th June, 1891.—*Mr. Christie*.*Not printed.*
- 62a.** Return to an order of the House of Commons, dated 1st July, 1891, for a copy of the report of Thos. Monro, government engineer, upon the Manchester Ship Canal. Presented to the House of Commons, 21st July, 1891.—*Mr. Mulock*.*Printed for both distribution and sessional papers.*
- 62b.** Return to an order of the House of Commons, dated 18th May, 1891, for copies of all letters, correspondence, documents and papers showing the number of extra or additional men employed on the old and new Welland Canal, between the 10th day of February, 1891, and the 7th day of March, 1891; the names of such men, the work required to be done, and the amount of money paid to each man. Presented to the House of Commons, 28th July, 1891.—*Mr. German*.*Not printed.*
- 62c.** Return to an address of the Senate to his excellency the Governor General, dated 17th June, 1891, for a statement and account showing the amount of money received and taken in excess of what was just and proper by William Ellis, superintendent of the Welland Canal, if any, from the 29th day of December, 1879, until the 11th day of September, 1889; also a statement showing the amount of money paid back by Mr. Ellis, if any, and date of payments, if any. Further, a copy of the bond given as security by Mr. Ellis, if any, to secure the payment of the money taken in excess. Presented to the Senate, 29th July, 1891.—*Hon. Mr. McCallum*.*Not printed.*
- 62d.** Return to an address of the House of Commons to his excellency the Governor General, dated 17th June, 1891, for copies of all petitions, letters and communications from the city of St. Catharines, and other municipalities on the Welland Canal, or from any persons or corporations, for the privilege of using surplus water from said canal for manufacturing or other purposes; and of the reports of engineers of canals, thereon, and the replies of the government to all such applications. Presented to the House of Commons, 12th August, 1891.—*Mr. Gibson*.*Not printed.*
- 62e.** Return to order of the House of Commons, dated 13th July, 1891, for: 1. Copies of the specifications prepared by the government and which formed the basis of the call for tenders for the work of constructing a drain from Lachine to Cote St. Paul, along the Lachine Canal. 2. Copies of all tenders filed for the said work, and of the reports of the officers of the department of railways and canals thereupon. 3. Copies of the report awarding the contract for the said work, and of the said contract. Presented to the House of Commons, 12th August, 1891.—*Mr. Préfontaine*.*Not printed.*
- 62f.** Return to an order of the House of Commons, dated 1st July, 1891, for copies of all reports of engineers respecting the proposed Soulanges Canal, showing the number of sections into which the work is to be divided, the length of each section, the quantities of the several classes of work in each section, and detailed estimates of the cost of each section; the whole to be accompanied with a continuous tracing or plan and profile of the whole line showing the several sections and the structures of each section. Presented to the House of Commons, 12th August, 1891.—*Mr. Mousseau*.*Not printed.*
- 62g.** Return to an order of the House of Commons, dated 27th May, 1891, for a statement showing all expenditure, and a return of all reports and plans of government engineers, if any, in connection with the Soulanges Canal, from 1873 to 1889, exclusively, and from 1889, inclusively, to June, 1890; also a return of all plans and specifications made by engineers and completed by them, at the said date, June, 1890, in relation to the said Soulanges Canal. Presented to the House of Commons, 12th August, 1891.—*Mr. Mousseau*.*Printed for both distribution and sessional papers.*
- 62h.** Return to an address of the House of Commons to his excellency the Governor General, dated 27th May, 1891, for copies of all tenders, both first and second calls, for sections one, two and three respectively, of the enlargement of the Rapide Plat or Morrisburg Canal, a division of the St. Lawrence Canals, the return to comprise the quantities of the several items in the schedule of prices on which the tenders were computed, and the aggregate of each tender. Also copies of all correspondence, orders in council, reports of engineers relating to the tenders, or contracts, for

works, or as to changes in location or of designs, and all estimates in detail of the cost of said works and the reason for rejecting the first batch of tenders. Presented to the House of Commons, 21st August, 1891.—*Mr. Murray*. *Not printed.*

- 62i.** Return to an order of the House of Commons, dated 3rd June, 1891, for a return of all letters and memorials complaining of the high water in the Rideau Canal between Kingston and Jones' Falls; copies of letters from Colonel By and others, showing the depth of water allowed for vessels navigating the canal; a statement showing the average depth of water in the canal for the first forty years after construction, and for the last ten years; also for copies of plans and reports of engineers engaged on the survey of the Kingston Mills Level, showing the estimate of cost of lowering the water and the quantity of land to be reclaimed if the water is lowered. Presented to the House of Commons, 26th September, 1891.—*Mr. Kirkpatrick*. *Not printed.*
- 63.** Return to an address of the House of Commons to his excellency the Governor General, dated 5th May, 1891, for copies of all correspondence, petitions, memorials, briefs and factums, and of any other documents submitted to the privy council in connection with the abolition of separate schools in the province of Manitoba by the legislature of that province; also copies of reports to, and orders in council thereon; also copies of any act or acts of said legislature abolishing said separate schools or modifying in any way the system existing prior to 1890. Presented to the House of Commons, 20th July, 1891.—*Mr. LaRivière*. *Printed for both distribution and sessional papers.*
- 63a.** Return to an address of the House of Commons to his excellency the Governor General, dated 5th May, 1891, for a copy of all petitions presented to his excellency with reference to the school acts of Manitoba; and all memorials, reports, orders in council and correspondence in connection with the same. Presented to the House of Commons, 20th August, 1891.—*Mr. Devlin*. *Not printed.*
- 63b.** Supplementary return to an address of the House of Commons to his excellency the Governor General, dated 5th May, 1891, for copies of all correspondence, petitions, memorials, briefs and factums, and of any other documents submitted to the privy council in connection with the abolition of separate schools in the province of Manitoba by the legislature of that province; also copies of reports to, and orders in council thereon; also copies of any act or acts of said legislature abolishing said separate schools or modifying in any way the system existing prior to 1890. Presented to the House of Commons, 4th September, 1891.—*Mr. LaRivière*—
Printed for both distribution and sessional papers.
- 64.** Return to an order of the House of Commons, dated 13th July, 1891, for copies of the petition of right presented to the minister of justice for his *fiat* by Joseph Desmarteau for improvements alleged to have been made by him on a "piece of land forming part of the property heretofore known as Logan's Farm, and being a portion of the lot number eleven hundred and thirty-six (1136) of the official plan and book of reference of the St. Mary's Ward, in the city of Montreal, measuring one hundred and fifty-six feet in width by a depth of four hundred and fifty-two (452) feet on the south-west side, and four hundred and eighty-seven (487) feet on the north-east side, English measure, and more or less, and being bounded on the north-east side by the highway known as Papineau Road, on the south-west side by a portion of the said lot number eleven hundred and thirty-six (1136), on the south-east by the lot number eleven hundred (1100) of said plan and book of reference, and on the north-west by Sherbrooke Street, being another portion of the said lot eleven hundred and thirty-six;" of the decision of the minister of justice; and of all correspondence on the same. Presented to the House of Commons, 21st July, 1891.—*Mr. Laurier*. *Not printed.*
- 65.** Return to an address of the Senate to his excellency the Governor General, dated 12th May, 1890, for a statement showing the expenses incurred by the inspector of penitentiaries in his visits, ordinary or extraordinary, to St. Vincent de Paul Penitentiary during the last ten years, as well as his personal expenses for each day of such visits, as those occasioned on each day of such visits by his travelling from Montreal to St. Vincent de Paul, and *vice versa*, for horses, servants, and their keep and lodging. Presented to the Senate, 18th June, 1891.—*Hon. Mr. Bellerose*. *Not printed.*
- 65a.** Supplementary return *re* St. Vincent de Paul Penitentiary. Presented to the Senate, 19th June, 1891, by *Hon. Mr. Abbott*. *Not printed.*
- 65b.** Return to an address of the Senate to his excellency the Governor General, dated 30th July, 1891, for a detailed copy of accepted tender, giving estimated quantity, price per unit, and amount of all drugs and medicines to be supplied the British Columbia Penitentiary by McPherson & Thompson, of New Westminster, B.C., for the year ending 30th June, 1892. Presented to the Senate, 12th August, 1891.—*Hon. Mr. McInnes (Victoria, B.C.)*. *Not printed.*

66. Return to an address of the Senate to his excellency the Governor General, dated 23rd June, 1891, for copies of all correspondence between the department of justice and the judges in Canada charged with judicial functions in criminal matters as well as the attorney general of each province, respecting the expediency of abolishing the functions of the grand jury in relation to the administration of criminal justice. Presented to the Senate, 8th July, 1891.—*Hon. Mr. Gowan*—
Printed for both distribution and sessional papers.
67. Statement of amounts paid for claims for bounty on pig iron manufactured in the dominion; showing quantities claimed upon and names of claimants, as well as amount paid in each case. Presented to the House of Commons, 28th July, 1891, by *Hon. Mr. Bowell*—
Printed for both distribution and sessional papers.
68. Return to an address of the House of Commons to his excellency the Governor General, dated 1st July, 1891, for a statement showing the amount of dominion notes in circulation on 31st May, 1891, and amount of gold and guaranteed debentures held in security on said date for redemption of said notes. Also statement showing the proportion of such gold reserve held by the minister of finance and receiver-general, and the proportion thereof held by any chartered banks for such redemption. Also statement showing the arrangements made with such banks, under which they hold such gold reserve. Presented to the House of Commons, 29th July, 1891.—*Mr. Mulock*—
Not printed.
69. Departmental report on charges preferred against the Commissioner of the North-West Mounted Police. Presented to the House of Commons, 30th July, 1891, by *Sir John Thompson*—
Printed for sessional papers only.
70. Return to an order of the House of Commons, dated 13th May, 1891, for copies of all correspondence since 1st July, 1890, from the New Glasgow board of trade and other boards or persons, respecting the through train from Sydney, C.B., to Oxford, Cumberland County, *via* the Short Line Railway. Also copies of all correspondence during said time from any person or persons, asking for better railway accommodation between Pictou and New Glasgow, to and from Halifax. Presented to the House of Commons, 31st July, 1891.—*Mr. Fraser*.....*Not printed.*
71. Return to an order of the House of Commons, dated 27th May, 1891, for copies of all tenders for the construction of the Annapolis public buildings; a copy of the contract entered into with the Government for the construction of the same; a copy of the conveyance to the Queen of the land upon which the same are erected; a statement of all amounts paid to the contractor on account of the work, with dates of payment. Presented to the House of Commons, 4th August, 1891.—*Mr. Lister*—
Not printed.
72. Return to an order of the House of Commons, dated 1st July, 1891, for copies of all correspondence and all documents, or other information in the possession of the Government, relating to entire horses stationed at the central experimental farm, or at any other of the experimental farms in the dominion of Canada. Presented to the House of Commons, 4th August, 1891.—*Mr. McMillan*—
Not printed.
73. Return to an order of the House of Commons, dated 27th July, 1891, for copies of all correspondence and orders relative to the dismissal of William Saunders and William Muttart, section foremen of the Prince Edward Island Railway, in March or April last. Presented to the House of Commons, 10th August, 1891.—*Mr. Perry*.....*Not printed.*
- 73a. Return to an order of the House of Commons, dated 27th July, 1891, for a return of all correspondence, letters or papers in any way connected with the dismissal, in June, 1884, of one Samuel Johnston, from his position as a preventive officer, in her majesty's customs, for the station from Clifton to Dunnville. Presented to the House of Commons, 23rd September, 1891.—*Mr. German*—
Not printed.
74. Return to an order of the House of Commons, dated 27th May, 1891, for a return showing: 1. Copies of all reports and correspondence relating to the permit system, and the administration thereof; copies of all regulations under which liquor is brought into the North-West Territories and sold there; also copies of all memorials addressed to the government relating to the present system and the sale of liquors, and the replies to the same. 2. Copies of orders or regulations relating to the sale of liquor on passenger trains in the North-West Territories, and within the limits of Banff Park, and statement of kinds and quantities of liquor so sold. Presented to the House of Commons, 12th August, 1891.—*Mr. Watson*.....*Not printed.*
75. Return to an order of the House of Commons, dated 18th June, 1891, for copies of the pay-roll of the last military camp at Sorel and St. John's, P.Q. Presented to the House of Commons, 18th August, 1891.—*Mr. Lépine*.....*Not printed.*

- 75a.** Statement showing names of tenderers, names of contractors and contract prices of military clothing for 1891-92. Presented to the House of Commons, 21st August, 1891, by Sir Adolphe Caron—
Printed for sessional papers only.
- 76.** Return to an order of the House of Commons, dated 17th June, 1891, for copies of all correspondence between the minister of customs and the collector of customs at Kootenay Lake, and between the minister of customs and any other person, relating to the admission of mining machinery into the Kootenay Lake district free of duty. Also a copy of instructions from the minister of customs to the collector of customs on Kootenay River, referring to the free admission of mining machinery. Presented to the House of Commons, 20th August, 1891.—*Mr. Mara. Not printed.*
- 77.** Return to an order of the House of Commons, dated 1st July, 1891, for copies of all correspondence, reports, paper writings and documents respecting the seizure and sale of the schooner "Marie Eliza," in 1887, by the collector of customs at Rimouski. Presented to the House of Commons, 20th August, 1891.—*Mr. Langelier. Not printed.*
- 78.** Return to an order of the House of Commons, dated 1st July, 1891, for a return showing:—1. The names of all permanent clerks in the department of public works, their duties and annual salaries. 2. Names of all extra clerks in the said department, their salaries, and the kind of work performed; also copies of their civil service examination certificates. 3. The names of all persons doing extra work outside of the building, and the nature of work, giving the names of ladies and gentlemen separately. 4. The names of mechanics or others employed in the government workshops at Ottawa. 5. The names of all messengers employed in the said department, either permanent or temporary. 6. The number and names of all labourers employed by the said department since January last, in and around the buildings under government control at Ottawa, including Rideau Hall, stating the kind of work performed and wages paid. Presented to the House of Commons, 21st August, 1891.—*Mr. McMullen. Not printed.*
- 79.** Return to an order of the House of Commons, dated 13th July, 1891, for: 1. Copies of all claims presented to the government since 1880, by Mr. Joseph Antoine Maurice, merchant, of the village of Chambly Basin, and Dame Julie Fournier, his wife, for losses suffered by them in reference to lands purchased by them from the government in 1875. 2. Copies of all correspondence and letters addressed to any department of the government by any person or persons, in relation to said matter. 3. Copies of all correspondence between any of the said departments, or between any Department and the claimants, or any persons acting for them or in their interests, in relation to such claims. 4. Copies of the order of reference made by government referring the said claims to Joseph Simard, Esq., then dominion arbitrator, and of his award. 5. Copies of correspondence following the said award. 6. Copies of the opinions given on the subject by the honourable the minister of public works, and of the opinion of the honourable the minister of justice. Presented to the House of Commons, 21st August, 1891.—*Mr. Préfontaine. Not printed.*
- 80.** Return to an address of the House of Commons to his excellency the Governor General, dated 18th June, 1891, for copies of order in council, correspondence, reports, statement of claims, receipts or accounts with or made by Dr. Walker, or on his behalf, or with or by any other person respecting the Dundas and Waterloo macadamized road, since the close of the session of 1889. Presented to the House of Commons, 24th August, 1891.—*Mr. Bain. Not printed.*
- 81.** Return to an address of the House of Commons to his excellency the Governor General, dated 3rd June, 1891, for copies of all correspondence between the imperial government and the government of Canada, on the subject of the copyright laws of Canada, and all other papers relating thereto, not already brought down. Presented to the House of Commons, 24th August, 1891.—*Mr. Edgar—
Not printed.*
- 82.** Third census of Canada—statement of population—compared with preceding censuses, 1891. Presented to the House of Commons, 26th August, 1891, by Hon. J. Haggart—
Printed for distribution only.
- 82a.** Census of Canada, 1891—electoral divisions—statement of population by districts. Also census bulletin No. 1, and statements of population of cities, of towns and of villages. Presented to the House of Commons, 27th August, 1891, by Hon. J. Haggart.*Printed for distribution only.*
- 83.** Return to an order of the House of Commons, dated 3rd August, 1891, showing: 1. The names of all employees of the customs at Montreal; the date of their appointment; their respective duties; the salary of each; their nationality; their place of birth; and, in case of their not having been born in Canada, for what period they had been in this country at the time of their appointment; and upon whose recommendation they had been appointed. 2. Whether they have all

- passed the civil service examination, and the names of those, if any, who have not passed this examination, since the law requiring it has been in force. 3. The names of those, if any, who have received salaries or pay in addition to that attached to the offices to which they were appointed; the amounts received by such persons, and for what additional work given. 4. The names of the extra labourers for whose services there was paid in 1889-90 the sum of \$12,176.25, as recorded in the Auditor General's Report for the year 1889-90 at page C—254. 5. To whom was paid the sum of \$5,930.29 for cartage at the customs house at Montreal, as recorded in the said report of the Auditor General at page C—254. Presented to the House of Commons, 14th September, 1891.—*Mr. Lépine*. *Not printed.*
- 84.** Return to an order of the House of Commons, dated 27th May, 1891, for copies of all correspondence, memoranda, documents, letters, petitions and all papers whatsoever in relation to the encouragement of the cultivation of the sugar beet and the protection of the manufacture and refining of beet-root sugar in the dominion of Canada, exchanged between the government or any of its members and any person or company. Presented to the House of Commons, 23rd September, 1891.—*Mr. Beausoleil*. *Not printed.*
- 85.** Return to an order of the House of Commons, dated 1st July, 1891, for copies of all correspondence, papers and documents relating to the appointment of customs officers at Crystal Beach and Point Abino, in the township of Bertie, and Carroll's Landing, in the township of Humberstone, in the county of Welland. Presented to the House of Commons, 23rd September, 1891.—*Mr. German*—*Not printed.*
- 86.** Return to an address of the Senate to his excellency the Governor General, dated 14th September, 1891, for all correspondence between his excellency and the Lieutenant Governor of the province of Quebec, in connection with the Baie des Chaleurs Railway, and all other papers and correspondence in the possession of the government on that subject. Presented to the Senate, 16th September, 1891.—*Hon. Mr. Miller*. *Not printed.*
- 86a.** Supplementary return to an address of the Senate to his excellency the Governor General, dated 14th September, 1891, for all correspondence between his excellency and the lieutenant governor of the province of Quebec, in connection with the Baie des Chaleurs Railway, and all other papers and correspondence in the possession of the government on that subject. Presented to the Senate, 23rd September, 1891.—*Hon. Mr. Miller*. *Not printed.*
- 86b.** Return to an address of the Senate to his excellency the Governor General, dated 21st August, 1891, for an account showing all the moneys expended by subsidy or otherwise on the Baie des Chaleurs Railway, from the commencement of the works thereon to the present time; the names of those to whom paid, and the amount, if any, appropriated to said works and remaining unpaid by the government of Canada. Presented to the Senate, 24th September, 1891.—*Hon. Mr. McInnes (Victoria, B.C.)*. *Not printed.*
- 87.** Return to an address of the Senate to his excellency the Governor General, dated 29th May, 1891, for copies of all orders in council, commissions and instructions for nominating a person or persons specially charged to examine the situation and resources of that part of the dominion known as the Great Basin of the Mackenzie; and also of the report or reports made by such persons, in order to put the government in a position to decide upon the measures necessary for the protection and development of the territory. Presented to the Senate, 23rd September, 1891.—*Hon. Mr. Girard*. *Printed for sessional papers only.*
- 88.** General statements and returns of baptisms, marriages and burials in the district of Chicoutimi, Gaspé, Montmagny and Iberville *Not printed.*

TWENTY-THIRD ANNUAL REPORT

OF THE

DEPARTMENT OF MARINE

FOR THE

FISCAL YEAR ENDED 30th JUNE,

1890.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1891.

To His Excellency the Right Honourable Lord Stanley-of Preston, Governor General of Canada, &c., &c.

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Twenty-third Annual Report of the Department of Marine.

I have the honour to be,

Your Excellency's most obedient servant,

CHARLES H. TUPPER,
Minister of Marine and Fisheries.

DEPARTMENT OF MARINE,
OTTAWA, 31st December, 1890.

CONTENTS.

	PAGE
REPORT SUBMITTED BY MINISTER.....	iii
REPORT OF THE DEPUTY MINISTER..	1

APPENDICES.

Aids to navigation in River and Gulf of St. Lawrence and approaches to Halifax Harbour, Report <i>re</i>	110
Decayed Pilot Fund, Montreal, Statement of.....	164
do Quebec do	157
Deck Loads, Statements and evidence submitted by Hon. P. Mitchell, before Parliamentary Committee in 1873, <i>re</i> Act <i>re</i>	170
Expenditure of Department, Summary of	55
Georgian Bay Survey, Report on.....	88
Life-boat Stations, Statement of	100
Load Line, Act to amend Merchant Shipping Acts <i>re</i>	148
Load Mark, Report of Committee of International Marine Conference <i>re</i> uniform	146
Masters and Mates, Report of Board of	85
Messenger Pigeons, Report on.....	196
Meteorological Service, Report on.....	57
Rewards for Saving Life, Statement of.....	155
River Police, Quebec, Report on	139
do Correspondence with Board of Trade, Quebec, <i>re</i>	141
Sick Mariners' Dues, Statement of.....	109
Signal Service, Report on	92
Signal Stations, List of	90
Steamboat Inspections Board, Report of.....	80
Tidal Observations, Report on.....	150
Wharves and Piers, Statement of Revenue from	107
Wharves under control of Department, List of.....	104

REPORT
OF THE
DEPUTY MINISTER.

To the Honourable

CHARLES H. TUPPER,

Minister of Marine and Fisheries.

SIR,—I have the honour to report on the transactions of this Department for the fiscal year ended the 30th June last, and to give an account of a considerable portion of the business up to 1st December, 1890.

A supplement will be issued to this report, comprising returns from the Chairmen of the Boards of Steamboat Inspection and of Examiners of Masters and Mates; the reports of the Toronto, Belleville, Montreal, Quebec, Three Rivers, Pictou and North Sydney Harbour Commissioners, the Pilotage Authorities, the Harbour Masters, the Port Wardens and the Harbour Police of Montreal and Quebec, together with statements of wrecks and casualties.

The total amount expended on the various branches of the public service administered by this Department, including the salaries of the Establishment Staff, during the fiscal year ended 30th June last, was \$807,417.53, while the total amount voted was \$920,420, which last named amount includes the departmental salaries.

It will be seen that during the last fiscal year the expenditure was \$113,279.99 less than the amount appropriated by Parliament. There has therefore been a gratifying reduction in the cost of management by this Department. This saving without impairing in any degree the efficiency of the service is due to the exercise of a more direct control by the Head Office over the various Agencies. Prior to the introduction of this system, it devolved upon the Agents of the Department in the different Provinces to audit and pay accounts before examination and approval at Ottawa. The work of the Department has been greatly increased with the above result. In view of the ever growing demands of the interests of navigation, rigid economy becomes necessary in the administration of the Department of Marine.

During the past fiscal year, the expenditure for Lighthouse and Coast Service amounted to \$466,155.09, while for the previous year it amounted to \$510,267.57, showing a reduction in expenditure of \$44,112.48, notwithstanding the fact that there has been an increase of 20 light stations, 30 lighthouses and 3 fog-alarms during the same period.

The whole number of persons engaged in the outside service of the Department at the date of this report was 1438.

The lighthouse service of the Dominion is divided as follows, viz.:—The Ontario Division, embracing all lights from Montreal westward to the North-West Territories; the Quebec Division, extending below Montreal and including the River and

Gulf of St. Lawrence and the Strait of Belle-Isle; the Nova Scotia Division, including Cape Race, Newfoundland; the New Brunswick Division; the Prince Edward Island Division and the British Columbia Division. The total number of light stations in the Dominion on the 1st December, 1890, was 599, and of lights shown, 705; the number of steam fog-whistles and fog-horns, 55; and the number of light-keepers, engineers of fog-whistles and other assistants, with crews of lightships, was 750.

The following is the number of lights shown, of fog-whistles and fog-horns in the several Provinces of the Dominion on the 31st December of each year, from 1886 to 1890, inclusive.

In these numbers are the light stations on the coasts of Newfoundland maintained by the Dominion.

		Light Stations.	Light- Houses.	Fog- Whistles.	Fog-horns.
31st December, 1868.....		198	227	2	.....
do 1869.....		219	233	2	.....
do 1870.....		240	278	4	.....
do 1871.....		264	297	8	.....
do 1872.....		280	314	13	.....
do 1873.....		316	363	17	.....
do 1874.....		342	384	18	.....
do 1875.....		377	444	22	.....
do 1876.....		407	488	24	.....
do 1877.....		416	509	25	2
do 1878.....		427	518	25	4
do 1879.....		443	542	23	6
do 1880.....		452	551	22	7
do 1881.....		462	553	23	9
do 1882.....		470	562	23	9
do 1883.....		484	578	23	9
do 1884.....		507	597	23	10
do 1885.....		526	617	23	12
do 1886.....		534	625	23	16
do 1887.....		561	658	23	24
do 1888.....		569	664	23	27
do 1889.....		579	675	24	29
do 1890.....		599	705	23	32
		=====	=====	=====	=====

The fog-whistle at Etang du Nord, Magdalen Islands, has been discontinued, which accounts for the reduction in the number as compared with previous year.

ONTARIO LIGHTHOUSE DIVISION.

This division includes the lighthouses and lightships in that part of the Province of Quebec lying west of Montreal, as also all the lights in the Province of Ontario, embracing the lights on the Ottawa River, the St. Lawrence River above Montreal, the great lakes, some of the smaller inland lakes, and a lighthouse and lightship on Lake Winnipeg, in the Province of Manitoba.

The number of lights in the Ontario Division, inclusive of the two in Manitoba, is 200. This number comprises lighthouses, light-beacons and lightships maintained by the Dominion. There are also 420 buoys and 20 beacons.

The number of lightkeepers in this division paid directly by the Government is 158, but in several cases assistants are employed by keepers and paid by them out of the allowance made by the Government for that purpose.

The lights in this division, with the exception of those on the Ottawa River and small lakes, were inspected during the months of July and August by Mr. Patrick Harty, Superintendent of Lights, and supplied with the necessary stores, the steamer "Celtic" having been chartered for that purpose for the sum of \$3,250. Mr. Harty also inspected all the lights on the Ottawa River.

The following work in respect of lighthouse construction and important repairs has been carried out during the past season in the Ontario Division :

The extensive repairs required at the Port Colborne light station, alluded to in last year's report, have been successfully completed. The outer end of the timber breakwater pier was torn down to the water level, and a cylindrical base of solid concrete, surrounded by a shell of $\frac{5}{16}$ steel plate, was built up from below the lowest water level, as a foundation for the new Lighthouse Tower.

This base forms practically a monolith 25 feet in diameter by 22 feet high, and, being carried below lowest water mark, where the timber of the pier will never be affected by rot, the base should be a permanent structure, requiring no further attention or repairs.

Upon this base an octagonal wooden enclosed tower has been erected, surmounted by the lantern previously in use, and the main light, which was temporarily replaced by a light on a pole, was again put in operation on the 1st August last.

The fixed bright light is elevated 70 feet above high water mark, and should be visible from all points seaward a distance of fourteen miles.

The new tower is painted white, the iron lantern is painted red, and the cylindrical base is painted brown. The top of the base is 15 feet high above the deck of the pier, and the height of the tower from the base to the vane on the lantern is 60 feet.

The fog-horn machine, which was formerly in a lean-to beside the lighthouse, is now in the base of the new tower, in a much more convenient position.

The height of the horn above the level of the lake is 30 feet, and the machinery is arranged, as heretofore, to give blasts of 11 seconds' duration every $1\frac{1}{2}$ minutes.

This work was carried out by Mr. W. H. Noble, foreman of works for the Department, and cost \$4,761.09.

The contract for the elevated walk on wrought iron bents was given to Messrs. Dickenson & Suess, and the walk has proved satisfactory, being stronger, more durable, and offering less resistance to the wind and waves than that previously used there.

The station is now in first rate order, and should be much more efficient than it has ever been before.

The range light buildings at Corunna, on the St. Clair River, to which allusion was made in last year's report, were satisfactorily completed under contract by Messrs. Sutherland & Purser, of Sarnia, whose contract price was \$339, and the lights were put in operation on the 10th May last. The towers are skeleton-framed square wooden buildings, with the side facing the line of range in each slatted to make them more conspicuous day marks. Each tower is 40 feet high from the ground to the roof, is painted white, and shows a fixed white or bright light from a reflector lantern hoisted to within 2 feet of the top. The light should be visible 4 miles in and over a small arc on each side of the line of range.

The front tower stands on ground 10 feet above the water, at the foot of Fane street, in the village of Corunna, at a point near the old wharf, and 40 feet from the water's edge. The light is elevated 48 feet above the water.

The back tower stands on the west side of Beresford street, 568 feet south, 13 degrees east, from the front one, on ground elevated 30 feet above the water. The light is elevated 68 feet above the water.

The two lights in range indicate the best water in the Canadian channel, past the shoals at the head of Stag Island on the west, and past the shoals at the mouth of Talford's Creek, on the east side. This range has given great satisfaction during the past season to all vessels, and has rendered possible the discontinuance of a light-ship maintained by subscription among vessel owners in American waters on the point of the shoal at the head of Stag Island.

The private light at Newcastle, Lake Ontario, also referred to in last year's report, was duly put in operation on the opening of navigation this year.

The details of the light are as indicated in last year's report. The light is elevated 29 feet above the level of the lake, and is visible 10 miles from all points of approach.

The lighthouse building, erected by the Harbour Company, consists of a very neat square wooden tower, surmounted by an iron lantern, rising from the roof of the company's storehouse on the end of the wharf.

This light the Harbour Company have undertaken to maintain as effectively as the Government lights on the lake.

The new lantern alluded to in last year's report was duly placed upon the lighthouse on Point Pelee reef, under the direction of Mr. W. H. Noble, and the total expenditure in connection with this change and carrying out repairs amounted to \$2,498.66.

The range light buildings alluded to in last year's report, at the entrance to Byng Inlet, were duly completed, and the lights put in operation soon after the opening of navigation this year.

The front range light building stands close to the channel, on the south side, three-quarters of a mile north-east by east, one-quarter east, from the light previously established on Gereaux Island. The light is fixed red, elevated 34 feet above the water, and should be visible 8 miles over a small arc on each side of the line of range. The illuminating apparatus is catoptric.

The light building is a square wooden tower painted white, 33 feet high from its base to the vane on the lantern.

The back range light is distant 1,520 feet, E. by N. from the front one. It is fixed white, elevated 60 feet above the water, and should be visible 13 miles over a similar arc. The illuminating apparatus is catoptric.

The tower is a square wooden open-framed building, painted white. The lantern and upper story are enclosed, and the side facing the range is slatted for some distance farther down, so as to render it more conspicuous as a day beacon. Its height from the ground to the vane on the lantern is 49 feet.

The two lights in range, bearing E. by N., lead into the mouth of Byng Inlet, with nowhere less than 4 fathoms water, clearing Magantawan Ledges on the south and Burton Bank on the north side.

The total expenditure in connection with the establishment of these range lights has been \$1,449.08.

The beacon light at Foote's Dock, Pointe aux Pins, on the St. Mary River, above Sault Ste. Marie, referred to in last year's report, was put in operation on the 4th May last.

The light is fixed red, shown from a small lenticular lantern hoisted on a mast. It is elevated 24 feet above the water, and should be visible 5 miles up and down the river. The mast is 20 feet high.

The light stands at the shore end of the dock near the bank of the river, and is intended as a guide to clear the shoals on the south side of the river from Point aux Pins to the entrance to the canal.

The total expenditure in connection with the establishment of this pole light has been \$14.33.

The steam fog-horn at the Point Peter light station, on the south shore of the County of Prince Edward, on Lake Ontario, referred to in last year's report, was only put in operation on the 21st November, 1890. Mr. Innes, the original contractor, having refused to carry on work, a delay occurred in transferring the contract to Messrs. Irving & Fegan, of Picton, who undertook the work for the sum of \$1,130.

Advantage was taken of the delay to build a breakwater in front of the lighthouse, composed of stone laid in cement mortar, and faced with steel plating. This work was executed by Mr. W. H. Noble, foreman of work, at a cost of \$513.01, and the fog-alarm building has been erected upon this substantial foundation, immediately in front of the lighthouse tower.

The fog-alarm building is a rectangular wooden building, painted white, with brown roof. The fog-horn issues from the side facing the lake, at an elevation of 16 feet above the water, and gives blasts of nine seconds duration, with intervals of twenty-eight seconds between them.

The total expenditure in connection with the establishment of this alarm was \$2,450.28.

The lighthouse on the north point of the Centre Brother Island, on the north shore of Lake Ontario, in the County of Lennox, referred to in last year's report, was satisfactorily completed under contract by Mr. Nathaniel J. Leonard, of Westbrook, his contract price being \$1,085.

The light was put in operation for the first time on the 15th September, 1890.

It is fixed white, elevated 31 feet above the level of the lake, and should be visible 10 miles from all points of approach. The illuminating apparatus is dioptric, of small size.

The tower is a square wooden building, and, with kitchen attached, is painted white. The iron lantern surmounting it is red. The height from the base to the vane on the lantern is 31 feet.

During the past summer a lighthouse was erected on the west end of Narrow Island, which lies off the north coast of Manitoulin Island, in the north channel of Lake Huron, Algoma, a short distance to the westward of Little Current.

The work was done under contract by Mr. Charles Mickler, of Collingwood, whose price therefor was \$1,425.

The light, which is fixed white, elevated 34 feet above the water, was put in operation on the 21st October, 1890, and should be visible a distance of 11 miles from all points of approach. The illuminating apparatus is dioptric, of small size.

The lighthouse is a square wooden building, and with kitchen attached, is painted white. The tower is surmounted by an iron lantern painted red. Its height from the ground to the vane on the lantern is 35 feet.

Two beacon lights have, during the past season, been established in Lake Temiscamingue for the benefit of the passenger and freight steamers now plying on that part of the Ottawa River.

They consist of lanterns hoisted on masts, with small sheds placed at their bases, the whole constructed on cribwork piers.

The lights are fixed white, elevated 30 feet above the ordinary level of the lake, and should be visible from all points of approach.

One of these lights is situated on Schooner Island, the other on Saucier Island, near Opemican Narrows.

The work was done under contract by Mr. A. Lumsden, of Opemican, the contract price being \$320.

A small lighthouse erected during the past season on Ditchburn's Shoal, in Lake Rosseau, about a mile southwardly from Rosseau, in the District of Muskoka, was put in operation on the 25th September last.

The light is fixed white, elevated 28 feet above the level of the lake, and should be visible 8 miles from all points of approach. The illuminating apparatus is dioptric, of small size.

The lighthouse, which stands upon a small cribwork pier, is a square wooden tower painted white, surmounted by an iron lantern painted red. It is 26 feet high from the pier to the ventilator on the lantern.

The work was done under contract by Mr. John Haw, of Bracebridge, the contract price being \$475.

The total expenditure in connection with the establishment of this light has been \$539.16.

It has been decided to erect a lighthouse on the south end of the island at the entrance to Peninsula Harbour, in Lake Superior, and the contract has been awarded to Mr. Mickler, of Collingwood, at the price of \$3165.

It has also been decided to establish a steam fog-horn at the east end of Long Point, Lake Erie, and the contract for the necessary buildings has been awarded to Messrs. McCall & Mason, of St. Williams, at the price of \$1,525.

It is proposed during the coming winter to remove the lighthouse now at Port Lewis, on the south shore of Lake St. Francis, in the County of Huntingdon, Que., to a pier on the edge of the channel opposite St. Anicet, a point where it will be of much greater utility than in its present position. Tenders for this work were invited last winter, but so late in the season that it could not be done at a reasonable figure, and consequently was postponed until this year.

For the further protection of the lighthouse tower at Colchester Reef it was decided to surround the stone foundation pier with crib-work piers, and to fill in between these and the foundation with loose stone, so as to provide a larger base to receive the shove of ice and shock of waves.

Tenders were invited for this work, but the lowest submitted from trustworthy contractors were considered so high that it was decided to be preferable for the Department to undertake the work. An Order in Council sanctioning this course having been issued, the work is now going on, under the direction of Mr. W. H. Noble, Foreman of Works.

Eight sections of crib-work out of twelve which will be required to surround the whole foundation have been placed in position and filled with stone, and the space between these and the cylindrical pier supporting the lighthouse has been filled with loose stone.

These will, it is thought, make the lighthouse much more secure than it has been heretofore.

The amount already expended in connection with this work is \$5,525.23.

During the past winter the crib work foundation of the lighthouse on Spectacle Shoal was re-built from the water's edge by Mr. Noble, at an expense of \$179.94.

The crib foundation of the front range light at Owen Sound, in the Georgian Bay, was also extensively repaired under contract by Mr. Robert Reed, of Owen Sound, at a cost of \$525.95.

During the past winter a contract was made with Mr. Thomas Mather, of Keewatin, to place 135 buoys and beacons in the Lake of the Woods, to indicate the navigable channel from the mouth of Rainy River to Keewatin and Rat Portage.

This work was carried out.

Mr. Mather's contract price is \$3,000 for the first year, and \$500 for each of the two succeeding years; all the buoys and moorings being furnished by him, to become the property of the Department at the end of the three years' contract.

In consequence of the opening of the Murray Canal it has been necessary to place eight new spar buoys to indicate the channel in the approaches, and it is in contemplation during the coming winter to build three range-light towers on cribs in Presqu'Isle Bay, to guide through the dredged channel from the upper entrance of the Murray Canal to Presqu'Isle Point.

It is expected that when these lights are established the range lights at Presqu'Isle and the Calf Pasture Shoal light can be discontinued.

The ice last spring carried away the beacon heretofore maintained on Crab Island, in Lake St. Francis, and, as it has been found that the channel marked by this beacon is not in general use by vessels navigating that part of the St. Lawrence, it is not proposed at present to re-erect it.

The beacon erected on the extremity of the spit off Bald Head, at the entrance to Weller's Bay, Lake Ontario, alluded to in last year's report, was carried away last winter in consequence of the wearing away of the bar on which it was built. As it is found that the foundation is very liable to change it has been thought well not to re-erect it.

Besides the more important repairs above mentioned, the ordinary minor repairs and painting, requisite to maintain the efficiency of the service, were carried out as usual.

The total cost of maintaining the lights, light-vessels, fog-bells, buoys and beacons in this division, including the Manitoba lights and lightships, and Rainy River light, for the last fiscal year, was \$84,035.65, and the expenditure for construction of lights for the same period was \$10,366.02.

QUEBEC LIGHTHOUSE DIVISION.

This division comprises the lighthouses and lightships below Montreal, on the River St. Lawrence, and on the Richelieu River and Lakes Memphremagog, and St. John as well as all the lighthouses, lightships, steam fog-whistles, gas, bell and other buoys and beacons in the River and Gulf of St. Lawrence, within the limits of the Province of Quebec, and on the north-west coast of Newfoundland and the Labrador coast. This division is under the charge of Mr. J. U. Gregory, Agent of the Department at Quebec, who also has under his superintendence the Dominion steamers "Napoleon III" and "Druid," as well as the Quebec River Police force.

There are in this division 151 fixed and revolving lights, 10 lightships, 3 of which are supplied with steam fog whistles; 8 fog guns and 11 steam fog horns; 116 buoys, 8 of which are gas buoys; 59 beacons and 9 live-saving canoes for service in the ice.

The steamer "Druid" during the past year supplied the lights between Quebec and Montreal, and attended to the gas and other buoys. She also supplied lights between Quebec and Father Point.

The steamer "Napoleon III" supplied all the lights in the lower part of the River St. Lawrence, the Gulf, Baie des Chaleurs, Strait of Belle-Isle, Labrador and north-west coast of Newfoundland. On the 18th October last this vessel, while endeavouring to make the harbor of Little Glace Bay, N.S., was unfortunately wrecked.

All the lights, fog-alarms, &c., in this division, were inspected by Mr. J. G. Bru-néau, one of the officers of the agency at Quebec. Captain Demers, of the "Druid," also inspected some of the stations when on duty in the vicinity, and the agent personally inspected twelve of the most important lights on the Lower St. Lawrence.

A steam fog-horn was established during the past season at Cape Norman, on the Newfoundland coast of the Strait of Belle-Isle, and was put in operation on the 4th August last. The alarm will sound blasts of 5 seconds' duration, with intervals of 35 seconds.

On the 1st July the light on Red Islet, in the River St. Lawrence, below Quebec, in the County of Saguenay, was changed from a fixed red light to a group-flashing white or bright light, showing three flashes with intervals of 10 seconds between their points of greatest brilliancy, followed by an interval of 30 seconds, during the greater part of which interval the light will be totally eclipsed, the light thus completing a revolution in 50 seconds.

In all other respects the light and station will remain as heretofore.

The back tower of the lower range on Isle Ste. Thérèse, River St. Lawrence, below Montreal, in the County of Hochelaga, having been destroyed by fire, a new lighthouse has now been erected, and was put in operation on the opening of navigating. The building was erected under contract by Messrs. Rousson Brothers, whose contract price was \$820.

The light is, as heretofore, fixed white, and the illuminating apparatus catoptric.

The light is elevated 48 feet above the ordinary level of the river, and should be visible 12 miles in and over a small arc on each side of the alignment.

The tower is a square wooden building, painted white, and is 42 feet in height from the ground to the vane on the lantern.

The front range light building stands close to the water's edge, on the north-east shore of the island, and is distant 600 feet N. 50° E. from the back light.

The light is fixed white catoptric, elevated 29 feet above the ordinary level of the river, and should be visible 10 miles over a similar arc to the back light.

The building consists of a wooden lantern painted white, standing upon an open post foundation.

The height from the ground to the vane on the lantern is 22 feet.

The two lights in range south 50 degrees west lead through the centre of the dredged channel from the vicinity of Cap St. Michel.

It was found that the steam fog-whistle heretofore maintained at Etang du Nord, Grindstone Island, Magdalen Islands, in the Gulf of St. Lawrence, was so located that vessels could not hear it until they were in dangerous proximity to the outlying reefs in that vicinity, and it was discontinued at the opening of navigation.

On the 12th May last the illuminating apparatus at St. Laurent light station, on the Island of Orleans, River St. Lawrence below Quebec, which had previously been catoptric, was changed to dioptric, a lens of small size having been set up in the lantern. The light in other respects is unaltered, being as heretofore, fixed white.

Point Rich lighthouse, maintained by Canada on the west coast of Newfoundland, in the Gulf of St. Lawrence, for the benefit of Canadian shipping was destroyed by fire on the 11th August, and no light has since been shown from that station. There is some difference of opinion among nautical men as to whether it is necessary or advisable to erect another lighthouse at the same locality, and I am now making enquiry of a number of the shipmasters who use the route through the Strait of Belle Isle, as to their opinion on this matter.

On the 6th September two schooners were moored in the River St. Lawrence, above Quebec, to serve temporarily as lightships, for the purpose of more accurately

indicating the ship channel, with the best water for deep-draft vessels, past Tremble Shoal and Paget Bank.

Each schooner is painted black, with the word "Lightship" in white letters on each side of the bulwarks, and shows a fixed red light from a lantern elevated 36 feet above water, and a fixed white light from a lantern 26 feet above water. These lights should be visible all around the horizon, unless partially intercepted by masts and rigging, to a distance of 10 miles. A red ball is also hoisted to the mainmast head, and if from any cause, the lightship is off her station, the ball will be lowered and the distinguishing lights will not be exhibited.

The Pointe aux Trembles lightship is moored in 7 fathoms off the south-east extremity of Tremble Shoal, and from it Pointe aux Trembles church bears N. W., and St. Antoine church S. W. $\frac{1}{2}$ W.

The St. Croix lightship is moored in 4 fathoms off the west extremity of Paget Bank, or Ecureuil Shoal, and from it Ecureuil church bears N. E. $\frac{1}{4}$ N. and St. Croix church S. W. by S.

On the 10th September the character of the gas light shown from the buoy on the west end of Beaujeu Bank, in the River St. Lawrence, below Quebec, was changed from fixed white to occulting white, the period of occultation being about 6 seconds.

At the same time the character of the gas light shown from the buoy on the east end of Beaujeu Bank was changed from fixed white to fixed pink.

The changes have been made for the purpose of readily distinguishing these buoy lights from the lights of the numerous small vessels that anchor in the vicinity.

The following is a synopsis of the principal repairs and improvements made at the lighthouse stations in this division during the past season, exclusive of the ordinary painting, which was done wherever required.

Bicquet.

An iron water tank of 800 gallons capacity was supplied this station, as also a large sail boat.

Belle Isle.

Heavy repairs had to be effected at this station and carpenters were sent down from Quebec for the purpose. The dwelling house was clapboarded and part of the roof was renewed and the entire roof was re-shingled. The lining and flooring of the stable were renewed. Two new floors were laid in the upper light house, the house of refuge was re-shingled and all the outbuildings were overhauled.

Cape Charles Range.

Owing to the very old age and decayed condition of the back tower, making it dangerous to life to attend the lamps, a temporary pole light was established on the 25th September.

A new tower was not erected, because it is expected that this light will be no longer required when the deep channel is permanently lighted.

East Point Anticosti.

The clapboarding which had blown off the tower in the spring was replaced.

Isle à la Pierre.

Two hundred tons of stone were placed around the pier to prevent undermining.

Lower Traverse Lightship.

Considerable repairs were made to this vessel, especially to the boiler

Manicouagan Lightship.

Some repairs were made to the vessel and her engine. A new set of tubes was put in the boiler.

Murray Bay.

The pole light formerly shown has been replaced by a wooden lantern erected on the roof of the wharf freight shed and the burner changed for a mammoth flat wick, and is a decided improvement over the light previously exhibited.

Red Island Lightship.

New tubes were put in the boiler and other necessary repairs made to the engine.

Upper Traverse Lightship.

A set of new pumps was supplied and some slight repairs made to the hull.

The lights at Algernon Rock, Brandy Pots and the Pilgrims had their burners changed for the Hink's patent duplex burners.

On the opening of navigation this year many buoys in the River St. Lawrence, between Quebec and the Saguenay, were changed in position to better define extremities of the shoals, as ascertained by Staff Commander Maxwell's late survey in that locality.

The buoys have been maintained in their new positions during the present season, and the changes have given general satisfaction to the pilots and others concerned in navigation.

The total amount expended for the maintenance of lights, lightships, provision depôts, buoys, beacons and fog-whistles in this division during the year ended 30th June last amounted to \$106,750.70 and the amount expended up to date for construction of lights, including the fog-alarm lately erected at Cape Norman, was \$5,326.14.

A special inspection of the River and Gulf of St. Lawrence between Quebec and the Strait of Belle Isle was made last summer by Mr. Wm. P. Anderson, Engineer of the Marine Department, and Lieut. W. H. Smith, R.N.R., Chairman of the Board of Examiners of Masters and Mates, who accompanied the steamer "Napoleon III" on her summer trip for supplying the lights and fog-alarms in the Gulf.

These officers were instructed by you to make a special examination of the aids to navigation in this part of the Dominion, and a special report of any improvements that could be effected in or additions that were required to the same, paying special attention to the suggestions that had been received from shipping firms and masters interested in this route.

Their joint report is published as an appendix hereto.

As a result of this report, the following improvements have been ordered :—

A.—The substitution of bombs for the fog-gun now fired at Belle Isle.

B.—Removal of the Forteau fog-horn from its present position to the extreme point, so that it may be more distinctly heard up and down the strait.

C.—A similar removal of the Greenly Island fog-horn.

D.—The establishment of a large buoy on Heath Point reef, Anticosti.

E.—A change in the character of the illuminating apparatus at Fame Point lighthouse, so as to render it more powerful and distinctive.

F.—The establishment of a steam fog-whistle at Cape Magdalen.

G.—The change of Father Point light from fixed to revolving.

H.—The abolition of the fog-whistle at Cape St. Anne.

The question of establishing one or more additional lights in the Strait of Belle Isle, and of establishing a fog-horn or other fog-signal station at or near Cap Chatte, also recommended in that report, are now receiving the attention of the Department.

Special attention is called to the following conclusions reached by the officers referred to respecting the unreliability of fog-signals :—

“ We have heard comparatively weak signals at long distances, while more powerful ones were inaudible at much shorter distances.

“ We have heard two reports from guns fired, as nearly as could be determined, under identical circumstances, give very dissimilar results. In view of these facts, which every intelligent navigator should endeavour to become acquainted with, and of which most of them must have had some experience, it is difficult to understand why many of them expect uniformly good results from all fog-signals on our coasts, and why there are some who run considerable risks and place their ships in danger on the assumption that they are going to pick up the alarms exactly where they expect to, although the vessel may have been navigated by dead reckoning for some time previous, and little account taken of the set of the currents. By using the lead more frequently when approaching these points no doubt fewer casualties would occur.

“ There are very few fog-alarms that are in ideal situations, or have been placed where they would be free from detrimental local influences, although the best locality available has in most cases been selected. We would instance, in illustration of our meaning, the fog-signal at South Point, Anticosti. It is as far out on the point as it can possibly be placed, with no trees, buildings or projections of land to obstruct the sound in any way in a seaward direction, and yet we are convinced that the shallow water over the submerged reefs, which show for nearly two miles off the point, often cause unequal heating of the atmosphere, and raise strata of air of variable temperature and density through which the sound can not penetrate. Somewhat similar conditions prevail at Heath Point. Yet, though these surroundings lessen the value of the signals, we have no doubt that mariners would complain if either of the stations were abolished.

"As a general principle, fog-signals should only be located at points which can be approached very closely without danger. At best, any fog-signal must be considered as defining locality, not distance."

The above conclusions appear to be sufficient explanation of the many complaints that have been urged against the fog-gun at Belle Isle, as all the investigations that it has been possible to make give proof that the gun has been properly attended to and regularly fired.

If additional proof of the unreliability of fog-signals on some occasions were required, the experience of the "City of Rome," when she struck on Fastnet Rock, off the Irish Coast, on the 8th June last, would be a case in point.

The fog-signal at the Fastnet Rock is made by the explosion of a gun-cotton cartridge, and is generally considered by mariners to be one of the most powerful and useful signals on the British coast.

In the official report of the Court of Enquiry upon the disaster it is stated that only a faint sound like a gun was once heard before the vessel struck, although evidence was produced to show that the explosive signals were fired at regular intervals.

The powder supplied for fog-guns during the past two years having been found by comparative trial at the various fog-gun stations to be inferior in sound-producing qualities to that used in 1888, special attention is being given to the supply for the future of a brand of powder that will be of the best possible quality for fog-signal purposes.

NOVA SCOTIA LIGHTHOUSE DIVISION.

This division, in charge of Mr. H. W. Johnson, Agent of the Department for the Province, includes at this date 170 lighthouses exhibiting 177 lights, 1 light vessel, 16 steam fog-alarms, 13 hand fog-alarms, 2 fog-bells, 3 signal-gun stations, 10 automatic whistling buoys, 7 iron bell buoys, 105 iron can buoys, about 650 spar and other small buoys, 8 stationary beacons, 15 life-boat stations, 3 humane establishments and 3 signal stations.

The lighthouses, fog-alarms and life-saving stations were inspected by Mr. C. A. Hutchins, Superintendent of Lights for the Nova Scotia District. Mr. Warner, engineer of the "Newfield," also examined the boilers and machinery, when opportunity offered.

Two new lighthouses, two new pole range-lights and one pole light have been completed and put in operation this year.

NEW LIGHTS COMPLETED THIS YEAR.

Cheticamp—Eastern Harbour.

Two range lights have been completed and put in operation at Eastern Harbour, Cheticamp, in the County of Inverness, Cape Breton, for the purpose of aiding vessels in making the harbour through the dredged channel.

Both lights are shown from lanterns hoisted on masts, having a small shed at their base painted white. The front range light is fixed red, elevated 45 feet above high water.

The back range light is fixed white, elevated 90 feet above high water, and distant 330 yards from the front light.

The two lights in range, on a S. by W. $\frac{3}{4}$ W. course, lead through the dredged channel, which is marked by spar buoys on both sides, to anchorage in Eastern Harbour.

Pictou Range Lights.

Two pole range lights have been erected on the farm of Alexander Fraser, on the north side of the entrance to Pictou Harbour, to show the direction of the channel between the sand spit off Pictou Bar light on the south, and Murdoch's Shoal on the north.

Both lights are fixed red, and are shown from reflector lanterns hoisted on masts. The outer range light stands about 600 feet back from the shore, elevated 56 feet above high water mark. The back range light is 450 feet N. W. by W. $\frac{1}{4}$ W. from the front one, and is elevated 75 feet above high water mark.

The total expenditure in connection with the establishment of these pole lights was \$159.22.

Clark's Cove.

A pole light was established and put in operation in Clark's Cove, West Bay, Bras d'Or Lake, in July, last.

The lantern is hoisted on a mast 20 feet high, erected on the main land on the northern side of the cove. The light is fixed red, elevated 95 feet above high water, and should be visible a distance of 6 miles.

A N.-W. course will lead vessels into the cove clear of the three shoals lying to the southward of George Island, and which have been marked by spar buoys.

Gabarus.

A lighthouse has been erected on Harbour Point, on the southern shore of Gabarus Bay, Cape Breton, for the purpose of aiding vessels navigating Gabarus Bay, and leading to a safe anchorage behind Harbour Point.

The light is fixed red, elevated 47 feet above the water, and should be visible a distance of 8 miles from all points of approach. The illuminating apparatus is dioptric, of small size.

The light building is a hexagonal wooden tower painted white, surmounted by an iron lantern painted red. It is 32 feet high from the ground to the vane on the lantern.

This lighthouse was built by Mr. Neil McNiell, under contract, and was put in operation on the 1st November. The contract price was \$650, and the total expenditure in connection with construction was \$748.33.

Page's Island—Port Latour.

A lighthouse has been erected on Page's Island, Port Latour, on the southern coast of Nova Scotia, for the purpose of aiding vessels seeking the harbour of Port Latour.

The light is fixed white, elevated 46 feet above high water mark. The tower is a square wooden building, with kitchen attached, painted white. The tower is

surmounted by an iron lantern painted red. The height from ground to vane on lantern is 34 feet. This lighthouse was built by Messrs. G. DeChamp & Sons, of Shelburne, for the contract price of \$1,425, and was put into operation on the 15th November. The total expenditure in connection with this building to date was \$1,009.57.

CHANGES MADE IN THE CHARACTER OF LIGHTS.

Egg Island.

A new Chanteloup clock and illuminating apparatus have been furnished, and the character of the light changed from an alternating red and white light, showing a flash every minute, to a group—flashing white or brights light, showing three flashes, with intervals of fifteen seconds between their points of greatest brilliancy, followed by an interval of thirty seconds. This change came into effect on the 15th June last.

Beaver Island.

A new Chanteloup clock with illuminating apparatus was also furnished to this station, and the character of the light changed from a bright light revolving every two minutes, to a bright light revolving or showing a flash every forty-five seconds. This change came into effect on the 15th June last.

The above two changes were made to obviate the risk of confusion between the two lights in question and also to increase their efficiency.

HALIFAX HARBOUR APPROACHES.

The great value of the shipping frequenting the port of Halifax throughout the year, and the large size of the ocean steamers now making use of it, together with the prospect of increasing importance, require that the approaches to the entrance should be as efficient as possible.

Accordingly, Mr. Wm. P. Anderson, Engineer of the Marine Department, and Lieut. W. H. Smith, R.N.R., Chairman of the Board of Examiners of Masters and Mates, received instructions from you to examine and compare the many suggestions and petitions received by the Department for improved aids to navigation in this locality, to visit the entrance personally, and to prepare a special report covering all the suggestions already made, and giving their opinion as to the most desirable means to be adopted to make the entrance as safe as practicable.

Their report on this service is annexed hereto.

In accordance with the recommendations contained in that report, directions have been given to carry out the following improvements:—

1. The establishment of an additional automatic whistling buoy on the outer bank off Sambro.
2. The removal of the steam whistle from Sambro Island to Chebucto Head, and the substitution for the whistle at Sambro of bombs or other explosive signals.
3. The establishment of a bell buoy on the Neverfail Shoal.
4. The replacing of the can buoys now on Mars Rock and Thrumcap Shoal by larger buoys surmounted by conspicuous distinguishing marks, and considerable improvement in the size of the buoys used in the harbour generally.

The first of these proposed improvements will provide a very complete chain of fog alarms on all sides of the outer entrance to the harbour, so that vessels would have difficulty in passing into dangerous water without picking up one or other of the fog-alarms which will encircle the mouth of the harbour.

The establishment of a fog-whistle on Chebucto Head will, it is confidently expected, prove of the utmost importance, as that station is admirably located for a fog-alarm, and a vessel can run in from any of the outside alarms with the full confidence of picking up this whistle in time to establish her position, and make a good course up the harbour.

The Neverfail Shoal has not heretofore been buoyed, as it is only a danger affecting the deepest draft vessels, but the establishment of a bell buoy on this point will make another signal in the chain leading from sea into the innermost part of the harbour.

REPAIRS TO FOG ALARMS.

Cranberry Island.

It is proposed to furnish a duplicate boiler to operate the fog trumpet at this station, and utilize the engine which now operates the whistle in conjunction with the large boiler for the duplicate boiler to be supplied to Yarmouth.

Meagher's Beach.

Through a defective chimney in connection with the boiler, the wooden roof of tower was set on fire in August last. The fire was extinguished by the keeper and assistant before much damage was done. Subsequently the chimney was taken down and rebuilt from the roof, and the roof itself repaired. This work was done by Mr. Michael Walsh, of Halifax.

Yarmouth.

A new boiler is in course of construction for this station, and will be placed in position alongside the present one as soon as finished. This important station will then be supplied with duplicate boilers, which will obviate the necessity of shutting down to effect repairs.

Bryer Island.

A new boiler is in course of construction for this station also, and will shortly, replace the old worn out boiler now in use.

Digby.

The old boiler, repaired last year, has been placed in position alongside the new one, and a Crosby Automatic attachment, with all necessary fittings and connections, supplied. The pipes leading from reservoir to engine-room have been boxed to protect them from frost, and the reservoir repaired.

The following is a statement of extensive repairs and improvements made at the different stations during the past year:—

LIGHTS EAST OF HALIFAX.

Devil's Island.

A new dwelling house for the keeper has been built, oil store removed and set up in a more suitable location, with new sills, floor and foundation, boat-house and

slip constructed at landing, western lighthouse tower re-shingled and upper room lined with matched lining, buildings painted, and bridge crossing the gulch between the two lighthouses renewed throughout. This work was done by Mr. Lund, under contract, for the total sum of \$1,115.

Country Harbour.

A new set of lamps, reflectors and copper fountains furnished, the lamps being changed from circular burners to Mammoth flat wick, in order to improve the effectiveness of the light.

Cape la Ronde.

A new lantern deck has been constructed on lighthouse tower, new sills and joints placed on lower floor, new window frame on east side of tower, and new entrance door to cellar. Wire rope stays fitted with buckles and set up anew, and lighthouse and outbuildings painted.

North Canso.

Arrangements are being made to renew lantern deck and erect a new 10-foot lantern fitted with improved illuminating apparatus, as the old lantern and apparatus have been condemned, and the wooden deck or platform has become decayed beyond the possibility of repairing. This work will be proceeded with as soon as possible.

Harbour au Bouche.

Both towers have been stripped, decayed portions of sills renewed and walls shingled. The foundation of lower light tower has been taken down and re-built, and both buildings put in a thorough state of repair and painted.

WEST OF HALIFAX.

Hobson's Nose.

The embankment on the north side of the island, which had been falling away, thereby endangering the lighthouse and buildings, has been secured by the construction of a crib breast-work, thoroughly ballasted with stones, and of the following dimensions: East from the boat-house, 50 feet long, 6 feet high, 8 feet wide; west from the boat-house, 75 feet long, 6 feet high, 8 feet wide. The old breastwork west of boat-house has been extended 16 feet, and the embankment, on the inner side of road leading to the landing, protected by a smaller cribwork. The face of the embankment has been sodded down to form a turf. This work was done by the keeper under contract, for \$265, in a satisfactory manner.

Little Hope.

Landing slip renewed and heavy stones removed. Corner of stonewall break-water, which had been undermined by the sea, built up with granite blocks set with cement mortar.

BUOY SERVICE.

All possible attention has been given to the care of the large number of automatic and other buoys now in use on this coast, but owing to the "Newfield" and "Lansdowne" being principally engaged in other service, it has been found impos-

sible to give all the attention necessary to insure, as far as possible, the safety and correct position of all our coastal buoys and to place in position the new buoys authorized.

Owing to tempestuous weather, infrequency of examining and changing moorings, and other unavoidable causes, the casualties in this service have been large in proportion to previous years.

The Louisburg automatic buoy and its moorings disappeared, and the "Newfield" made efforts to grapple it, but the buoy was not recovered, and has not yet been replaced. A new buoy will be provided for this danger.

The "Newfield" brought in the Blonde automatic buoy for repairs, and a new buoy was placed in June last.

The "Lansdowne" also brought in the Lockeport automatic buoy, found adrift with loss of moorings and damaged, and placed new buoy and moorings.

The "Newfield" grappled for and recovered the Outer automatic buoy off Halifax, which had disappeared, brought it in for repairs, and placed a new buoy and moorings.

The Lurcher automatic buoy, which had gone adrift, was brought in by the "Newfield" and a new buoy and moorings placed.

The Lahave bell buoy, which had capsized, was righted, and a new cage placed on the buoy.

The S. W. Breaker, Port Medway, bell buoy which had capsized, was righted.

The "Newfield" brought in the Sisters bell buoy with loss of cage and spindle, and placed new buoy and moorings.

The "Lansdowne" brought in the Brazil bell buoy, found adrift with loss of moorings, and placed new buoy and moorings.

All of the above mentioned bell buoys were of the Trinity House pattern, and have been found unsuitable for service on this coast, owing to their liability to capsize through the formation of ice about the bell and cage, making them top heavy, and poor results from the bell, which is placed so near the deck.

An experimental test was made of a Trinity House buoy with cage removed and fitted with an attachment planned by the Inspector of Lights, having the bell elevated on standards about 4 feet above the deck. This buoy was moored off the Sisters, Sambro, on 30th November, 1888, and remained intact and in position until 3rd January, 1890, and on account of clear sound produced even in calm weather, and which was heard a greater distance than ever before, gave great satisfaction to the pilots and other. Four new buoys have recently been constructed on this principle.

A bell buoy, which had been placed off Yarmouth Sound, was found two days afterwards low in the water. The buoy was brought in for repairs, and replaced on the 2nd of August last.

The "Newfield" placed a new iron can buoy and moorings on Pease's Ledge, as the old buoy was found adrift with loss of moorings.

The buoy at the Roaring Bull, Canso, having been picked up adrift with loss of moorings, the "Newfield" placed new buoy and moorings.

A new cage was also placed on the Lichfield iron can buoy.

The following additions have been made during the year:—

A bell buoy, painted red, was placed off Yarmouth Sound, in the Bay of Fundy, on the western coast of the Province, as a fairway buoy, for the purpose of aiding vessels seeking the entrance to Yarmouth. The buoy is moored in 10 fathoms of water.

Buoys were placed to mark the shoals lying outside of entrance to Clark Cove, on the north side of West Bay, Bras d'Or Lake, Cape Breton, viz., a red spar on western edge of shoal off George Island; a red spar on western edge of Paddle Shoal; a black spar on eastern edge of shoal, west from Paddle Shoal. These buoys are moored in 4 fathoms of water.

Three spar buoys were placed to mark shoals at entrance to Crow Harbour, in Chedabucto Bay, in the County of Guysboro', as follows: A red spar on Corveau Reef; a black spar off rock, west end of Rook Island, and a black spar on Brodie Rocks.

Three spar buoys were placed to mark shoals in Brichtown Cove, in Shelburne County, maintained under contract by Mr. James S. Aker for three years at \$25 per annum.

Four spar buoys were placed to mark shoals entering Upper Prospect Harbour on the southern coast of Nova Scotia, Halifax County, as follows:—

A black spar off Kelly's Point; two black spars off Kelly's Reef; one red spar off rock on east side Heron Island, the contract being awarded to John D. Christian for three years for \$38 per annum.

One cask and two spar buoys were placed to mark shoals at the entrance to l'Ardoise, Richmond County, Cape Breton, under contract for three years by Mr. Ephraim Preghent, at \$24 per annum.

Five spar buoys were placed to mark shoals off entrance to Three Fathoms Harbour and the course of channel inside, and the contract awarded to Mr. G. F. Graham for three years, at \$66.66 per annum.

Sable Island.

The lighthouses, out-stations and life-saving apparatus were inspected by the Superintendent of Lights in July last, and arrangements made for carrying out repairs and the erection of new buildings.

A new dwelling-house was erected and completed for the accommodation of the men at the main station.

A new dwelling-house, $1\frac{1}{2}$ storeys high, 22 by 28 feet, with ell in the rear 18 by 14 feet, and a new barn 30 by 37 feet, 12 feet posts, was erected on new ground and in a more convenient location at No. 4, East End Station. One of the old barns was also removed to a new site and put in thorough order.

It was found on stripping the East End lighthouse (No. 6 Station) that the sixteen principal posts which support the tower were in an advanced state of decay at their lower ends. All the decayed parts were removed and pitch pine timber spliced on in their places.

About one-half of the wood comprising the round tower under lantern was also found to be in a very bad state of decay, and all affected parts were consequently

removed and replaced by sound material. The sides of main tower were then stripped and re-shingled, and the whole painted. This lighthouse, as well as the West End, is now in a thorough state of repair.

Materials and a boat-builder were sent to the island to fit extra timbers into and thoroughly overhaul the despatch boat. This was satisfactorily done, and the boat has since made a successful voyage in bringing to Halifax the captain and crew of the wrecked Norwegian barque "Gerda."

In accomplishing the above work only four carpenters were sent from Halifax, along with materials, and much of the work has been done by the island staff, under the supervision of the Superintendent.

St. Paul's Island.

During the past summer the "Newfield" laid a telegraph cable between the island and Meat Cove, in Cape Breton, and telephonic communication has been established between the telegraph station at Meat Cove and the Superintendent's residence on the island.

A signal station has been established at the main station, in charge of the Superintendent of the Humane Establishment, and the necessary signal flags and code book furnished.

Cape Race Light.

As stated in the last annual report the lighthouse at Cape Race, on the Island of Newfoundland, was formally transferred by Her Majesty's Government to the Government of the Dominion on the 1st July, 1886, and the sum of \$100,151.50, being the balance of the moneys collected by the Board of Trade, London, for light dues, was paid to the Dominion Government, it being agreed that the lighthouse and fog alarm should be maintained in future at the expense of the Dominion, and no dues be charged for such maintenance. The cost of maintenance of the station for the past fiscal year amounted to \$4,298.74, of which amount \$2,024.17 was expended for coal, freight, &c., and \$663.23 for repairs.

The total cost of this station since it was transferred to the Canadian Government, up to the 30th June last, was \$21,234.20, being an average of \$5,308.55.

The total cost of maintenance of the lights, steam fog-whistles, &c., in the Province of Nova Scotia, including humane establishments at Sable, St. Paul and Scattered Islands, for the last fiscal year, amounted to \$139,459.56, and the amount expended during the same period on construction of lights was \$2,925.81.

NEW BRUNSWICK LIGHTHOUSE DIVISION.

This division comprises all the lighthouses, fog-whistles, buoys and beacons on the coasts and rivers of the Province of New Brunswick, and is under the charge of Mr. J. H. Harding, Agent of the Department at St. John, N. B. At present there are in operation in this division 112 lights, 1 lightship, 13 fog-alarms, 3 automatic buoys and 480 other buoys.

A lighthouse was established on Ward's Point, Rockport, at the entrance to Cumberland Basin, in the County of Westmoreland, and put in operation on the opening of navigation last season.

The light is fixed white, elevated 72 feet above high water mark, and should be visible ten miles over an arc of $208\frac{1}{2}$ degrees, between bearings of E. N. E. round through south to S. W. $\frac{1}{2}$ W. The illuminating apparatus is dioptric, of small size. The tower is a square wooden building, painted white. Its height from base to vane is 22 feet.

A lighthouse was also established upon Belloni's Point, on the east side of the entrance to Bathurst Harbour, Bay des Chaleurs, in the County of Gloucester, and put into operation on the opening of navigation last season.

The light is fixed white, elevated 30 feet above high water mark, and should be visible 10 miles from east round through south to west. The illuminating apparatus is dioptric, of small size. The tower is a square wooden building, painted white, and is 22 feet high from its base to the vane on the lantern. The light is intended principally to indicate the outside limit of the shoal extending off the mouth of the harbour.

Two range lights were also established near Hatfield's Point, on the west side of Belle Isle Bay, in King's County, and put in operation on the opening of navigation last season. These lights stand at the head of the dredged channel leading from the main waters of Belle Isle Bay to the public landing, and are for the purpose of leading up to and through this dredged channel. The front light is fixed red, shown from a lantern hoisted on a mast 20 feet high. It is elevated 25 feet above high water mark, and should be visible two miles in the line of range.

The back light stands 160 feet N by E. $\frac{3}{4}$ E. from the front one, and is shown from a lantern attached to the end of a dwellinghouse by a bracket, at an elevation of 17 feet above the ground. The dwelling is a square wooden building, painted white. The light is fixed white, elevated 26 feet above high water mark, and should be visible two miles in the alignment. The alignment shows the centre of the dredged channel, N. by E. $\frac{3}{4}$ E., at the outer end of which, on the port side, a black can buoy is moored. Both sides of the channel from the buoy to the public landing are marked by bushes.

St. John Harbour Approaches.

An automatic whistling buoy, painted black, has been moored off Black Point, in the Bay of Fundy, at the entrance of the Harbour of St. John, and anchored in about 16 fathoms of water.

The buoy is of the Courtenay pattern, surmounted by a 10-inch whistle, and is sounded by the action of the sea, giving a blast every time it falls into the hollow of the waves. In smooth weather the whistle may not sound.

The establishment of this buoy adds an important link to the chain of fog signals in the approaches to this harbour, one of the most important on the Dominion coasts in view of the large European and American trade now frequenting it, in view of its railway facilities, and of its increasing importance both as a summer and a winter port.

With this buoy in position it is thought that the harbour will be efficiently provided with aids to navigation, both for dark and for foggy weather, and I take pleasure in calling attention to the printed circular of the St. John Board of Trade, in which they point out that St. John is one of the best lighted harbours in the Dominion.

The following is a synopsis of the principal repairs and improvements effected at the lighthouse stations in this division.

Bathurst Beacons.

Repairs were carried out on the back beacon at this station at a cost of \$228.50.

Belle Isle.

The shed on which the outer range light was erected was carried away by ice during the spring freshet. The light has been replaced, and erected on a pole secured to the wharf.

Cap Enragé.

A new shed was erected over the water tanks at this station at a cost of \$147.

Dipper Harbour.

The arrangement of the lantern glass in the small tower was modified so that additional light could be thrown out in a south-easterly direction, as it was found that, as first established, the light was not sufficiently powerful on that bearing.

Grindstone Island.

Repairs involving an expenditure of \$230 for materials and labour were carried out at this station. It is proposed during the coming season to remove the fog-alarm to a more prominent position in front of the lighthouse.

Grand Manan Fog-Alarm.

Improvements are being carried out at this station in connection with the water supply, new tanks made, pipes re-laid and a tramway built to the fog-alarm.

Miramichi Lightship.

Repairs were carried out on this vessel, costing for labour and material \$151.99.

Partridge Island Light and Fog-Alarm.

Damages caused by a storm to the roof of the fog-alarm were repaired, and repairs also made to the boiler.

South-West Head.

This station was much injured last year by a whirlwind, and the damages are being repaired by the keeper.

Williams' Landing.

The light at this station was run into and carried away by a vessel, and it was found necessary to erect a new one. The work is at present in progress.

In addition to the repairs and work above specified, painting and various minor repairs were carried out at a number of stations.

The total cost of maintaining the lights, fog-whistles, buoys and beacons in the Province of New Brunswick, for the fiscal year amounted to \$61,608.91, and the amount expended during the same period on construction of lights was \$3,498.68.

PRINCE EDWARD ISLAND LIGHTHOUSE DIVISION.

This division is under the charge of Mr. Artemas Lord, who is Agent of the Department at Charlottetown. There are 52 lights and one fog-alarm, and 39 light-keepers. The majority of the lights are situated on headlands, and serve the general purposes of navigation, and the remainder are harbour lights, intended principally for the benefit of fishermen. In this division also 35 harbours are buoyed by the Department, and during the past season an automatic whistle buoy was moored off Indian Rocks, near Wood Island lighthouse, in Northumberland Strait, off the south coast of the island. This buoy is sounded by the action of the sea, the whistle giving a blast every time the buoy falls into the hollow of the waves. The sound is reported to have been heard at a distance of 15 miles.

The lights in this division were inspected last season by the agent in the Government schooner "Prince Edward," and the usual supplies delivered. From the report received the lighthouses appear to be in fair condition, and kept in good order.

During the past season two range lights were established on Brighton Beach, on the east side of the North River, in Charlottetown Harbour, on the Strait of Northumberland, and put in operation on the opening of general navigation last season, and will be maintained throughout the season of general navigation, and at such times in winter as any steamers are running to Charlottetown.

Both lights are fixed red, shown from reflector lanterns hoisted on masts, with a diamond shaped slat-work beacon attached to the head of each mast as a day mark, and a shed at the foot, the whole painted white.

The front range mast stands upon the north-western corner of the breakwater of the Hon. G. W. Howlan's property, and is 40 feet high.

The light should be visible for 7 miles over a small arc on each side of the alignment.

The back range mast stands on the old asylum grounds, 1,275 feet due north from the front one, and is 42 feet high.

The light is elevated 72 feet above high water mark, and should be visible 9 miles over a small arc on each side of the alignment.

Vessels entering will keep the alignment of the Haszard's Point range until the Brighton Beach range lights are brought in one, when the course must be changed due north and the alignment kept until off Canseau Point, whence the course up the harbour may be judged by the town lights.

In consequence of the establishment of the Haszard's Point range lights the streak of red light shown from a window of the Blockhouse Point lighthouse, on the western side of the entrance to Charlottetown Harbour, on the Strait of Northumberland coast of Prince Edward Island, which indicated the direction of the bell buoy from the lighthouse, was no longer required, and has therefore been discontinued from the opening of navigation last season.

In consequence of formation of sand spits and banks in the alignment of the range lights at Tracadie, Grand Tracadie Harbour, in Queen's County, on the Gulf coast, the range lights as usually shown from the established towers were discontinued, and two temporary lights, consisting of lanterns hoisted on masts, were

established on the western side of the harbour. But the range towers have since been removed into the alignment of the masts, and the lights are now shown from them.

The front tower stands upon the sand beach on the west side of the entrance, 1,800 feet back from the shore line, and the fixed red light is elevated 40 feet above the water.

The back tower stands 750 feet S. W. by W. from the front one, and the fixed red light is elevated 47 feet above the water.

Both lights should be visible 8 miles.

The range lights in one lead in S. W. by W. past the buoys, leaving the buoy outside the bar on the starboard hand, the buoy inside the bar on the port hand, and the red spar buoy at the westernmost bend of the channel on the starboard hand. The buildings can now be used as day marks.

The towers are liable to be moved again at any time as the channel shifts.

The channel is intricate, and liable to change in any storm; consequently, strangers should not attempt the entrance with any wind on the shore, nor under any circumstances if drawing more than 5 feet.

During the past winter further protection work to the lighthouse on Sandy Island, Cascumpec, was carried out, at a cost of \$320. A large quantity of brush and stone was placed on the eastern end of the island, and the agent reports that the work has been well and strongly built. Other repairs were also carried out at this station, and it is now in good order.

At Rustico station, also, an addition of brush and stone work was added to the breastwork built last year, involving an expenditure of \$300. This work was found necessary, chiefly in consequence of a channel having been cut through a bank in the harbour, which caused a rapid current to strike the beach immediately above the protection work and threatened to undermine the whole point. On the sea front, brush and stone were also laid to keep the sea from breaking in upon the beach. The work done so far has proved effective.

Repairs are at present being made to the lighthouse station at Block-house Point.

The total cost of maintaining the lights in the Province of Prince Edward Island for the last fiscal year was \$16,968.80, and the cost for construction of lights amounted to \$2,219.19.

BRITISH COLUMBIA LIGHTHOUSE DIVISION.

This division is under the charge of Mr. H. G. Lewis, Agent of the Department at Victoria. There are at present 11 lighthouses and 3 fog-alarms in this division, under the charge of 11 keepers, who provide the necessary assistants.

In 1871, when British Columbia became a portion of the Dominion of Canada, there were only 2 lighthouses, viz., 1 on Race Rocks, in the Strait of Fuca, and another on Fisgard Island, at the entrance of Esquimalt Harbour. There was also a lightship stationed at the entrance of Fraser River.

Since Confederation much has been done for the improvement of navigation in this Province. Lighthouses have been established at the following points, viz., at

Cape Beale, entrance to Barclay Sound; at Beren's Island, at the western entrance to Victoria Harbour; at Discovery Island, in the Strait of Haro; at Active Pass, in the Strait of Georgia, on the east point of Saturna Island; at Sand Heads, in the Fraser River, replacing the lightship above referred to, at Point Atkinson, at the entrance to English Bay, at Brockton Point at the entrance to Vancouver Harbour, and at Entrance Island, in the Strait of Georgia. A lighted buoy is also maintained on Shoal Point in Victoria Harbour.

Steam fog-alarms have also been established at Race Rocks, Discovery Island and Point Atkinson, and fog-bells rung by machinery at Beren's Island, Active Pass, Sand Heads and Brockton Point, and in addition to these aids to navigation, extensive additions have been made to the buoy system.

Representations were made during the present season by the shipping interests in British Columbia in regard to the necessity for the erection of a lighthouse and fog-signal at Turn Point, Stuart Island, and at Patos Island, in Washington Territory. The places referred to are situated in United States territory, but would serve the interests of navigation much better than any points which might be selected on any islands in Canadian territory, and the United States Government were asked whether there is any prospect of the two lights and fog-alarms referred to being erected by that Government; and, if not, whether the Government of Canada would be permitted to establish the lights and fog-alarms, sufficient land being allotted for the purposes of a station on each island, it being understood that, in the event of the desired permission being granted these aids to navigation would be maintained free of expense to United States shipping, and that no light dues would be imposed on shipping making use of the lights.

A reply just received conveys the gratifying information that an appropriation will probably be made for the establishment by the United States Government during the coming season of these two important light and fog-alarm stations.

The value of these aids to navigation cannot be overestimated. Besides being absolutely necessary for the safe navigation of large steamers between Victoria and Vancouver, they will serve an immense amount of American shipping plying not only to Canadian ports, but between San Francisco, Portland and Alaska.

During the present season a fog-horn operated by steam and compressed air was established at the light station at Sea Bird Point, the eastern extremity of Discovery Island, in the Strait of Haro, south-east of Vancouver Island, and was put in operation on the 1st July last.

The horn sounds blasts of 8 seconds' duration, with intervals of one minute between the blasts.

The fog-alarm building is situate about 300 feet south-eastwardly from the lighthouse, and is of wood, painted white, with a brown roof. The horn is elevated about 45 feet above high water mark.

This fog signal will be found of great use, as it serves to mark an important turning point at the junction of the Juan de Fuca and Haro Straits and can be approached on a direct course from a considerable distance in each direction.

A light and fog-bell were also established upon the extremity of Brockton Point, in the First Narrows, Burrard Inlet, at the entrance to Vancouver Harbour, and put in operation on the 15th September last.

The light is exhibited from an anchor lens lantern hoisted to the top of a mast, and shows fixed white from all points of approach, except over Burnaby Shoal, which is covered by a red sector, extending over an arc of $29\frac{1}{2}$ degrees, between the bearings of W. N. W. and W. $\frac{3}{4}$ S. The light is elevated 48 feet above high water mark, and should be visible 8 miles.

The mast is painted dark red and is 30 feet high. It stands immediately behind the fog-bell tower, which is a square wooden building 24 feet high, painted white.

The fog-bell faces N. by E., is elevated 42 feet above high water mark, is worked by machinery, and sounds one stroke every twenty seconds.

This light and fog bell are intended merely for harbour use to assist vessels in rounding the point and in clearing Burnaby Shoal in the harbour.

Representations have been made to the Department that in order to render the navigation of the First Narrows safe at all times, a light house, fog signal, and semaphore station are also required on Observation Point, at the western extremity of the First Narrows; the semaphore to be used to prevent vessels from entering and going out through the Narrows at the same time. This matter is now receiving the attention of the Department.

A contract was entered into with Mr. J. A. Bittancourt, of Nanaimo, for the construction of a lighthouse on Yellow Island, Baynes Sound, in the District of Vancouver, but as the work was not carried out in accordance with the specifications it was found necessary to take it out of the contractor's hands and complete it at his expense. The contract price was \$4,070

A contract was also entered into during the present season with Mr. George H. Frost, of Nanaimo, for the erection of a lighthouse tower with dwelling attached, fog-alarm building and outbuildings at Carmanah Point, on the south-west coast of Vancouver Island. The work was to be completed by the 1st December, 1890, at a contract price of \$7,315, but the contractor has reported that in consequence of the rainy season having set in, and the difficulty of landing materials and supplies at the site, owing to its exposed position and the prevalence of westerly gales, he found it almost impossible to complete the work this year and asked permission to suspend work on the contract, which was granted.

This station, when completed, should efficiently guard the entrance to Juan de Fuca Strait from the Pacific Ocean, and should be the first point made by vessels from China and Japan. It is proposed to make it in every respect a first-class station. The light will be a group-flashing bright light of good power. The fog-horn machinery will be in duplicate so as to guard against the possibility of any breakdown; and a telegraph and signal station for communication with vessels by the international code of signals, will also be maintained at the same point, so that immediate communication can be had with all British Columbia ports.

During the past season representations were made by the Local Government of British Columbia as to the necessity for a re-survey of the channel of the Fraser River, the placing of a lightship at the entrance of the channel capable of being shifted as the channel may shift, and the necessity for providing and keeping in reserve a supply of buoys sufficient to replace those that might from time to time be carried away. An appropriation was made by Parliament last session for the re-survey of that portion of the Fraser extending from Garry Bush to a point 6

miles above the city of New Westminster, and the work is now being carried on under the supervision of Mr. Gamble, C.E.; careful soundings are also taken every two months by the Department of Public Works, showing the depth and direction of the channel through the Sand Heads. As soon as the upper portion of the channel has been surveyed it is proposed to issue a chart showing the results of the survey.

It has not been deemed necessary to establish a lightship at the entrance to the channel at the Sand Heads, because its value to shipping would not be at all commensurate with its cost. The inner part of the channel could not be navigated at night, even if a lightship were placed at the entrance, and the maintenance of buoys and the general conservancy of the waters are more efficiently attended to without such a vessel. Steps have, however, been taken by the Department to erect on each side of the entrance a pile beacon, for the purpose of indicating its exact location more efficiently than could be done by buoys. Arrangements are also being made to establish a tide gauge for the greater convenience of vessels entering the Fraser.

Orders have also been given to provide and keep in reserve a supply of buoys sufficient to replace those that may from time to time be carried away, and a wharf has been erected on the Fraser for buoy storage, at a cost of \$239.25. Four additional buoys, recommended by the officers of the Department, have also been established. The buoys required for use on the Fraser are of an expensive character, costing from \$287 to \$325 each.

Representations have been made by the Victoria Board of Trade that there was neglect in heeding their oft-repeated notices as to the urgency for lights, beacons and buoys, particularly on the coast of Vancouver Island, north of Nanaimo, but no communications appear to have been received from the Board in question in regard to improvements to navigation in any part of British Columbia. Representations have, however, been received from other sources as to the necessity for two small harbour lights for the ports of Nanaimo and Departure Bay, and for a beacon, two buoys and a lighthouse north of Nanaimo. Arrangements have been made for the placing of the buoys, but owing to the large expenditure which was being incurred on more important lights in that Province it was not deemed advisable to proceed with the erection of the beacon and lighthouses at present. It will be seen, however, by reference to what has been done in providing and maintaining aids to navigation in British Columbia, during the past few years, that there has been no neglect of the requirements of that Province in respect to navigation, and in recognizing the already great and continually growing importance of our shipping interests in the Pacific Ocean, and particularly the importance of rendering the navigation between Victoria and Vancouver as safe as possible for the large steamers which are now running on the route between British Columbia, Japan, and Hong Kong, and which will probably be supplemented by still larger vessels in the near future.

You have directed that the Engineer of this Department should early next season proceed to British Columbia to examine and report fully upon all aids to navigation in those waters, both those now existing and such others as may be required, to the end that the Department may intelligently take the best possible steps to facilitate and ensure the safety of this branch of the commerce of the Dominion.

During the past year repairs were made to Beren's Island station, East Point, and Saturna Island, but they were only of a minor character.

The Custom house wharf at Victoria, which is largely used by the Department of Marine, was extended by that Department in order to make it available for the lighthouse steamer being moored to it. The work was done by contract and the piles coppered at a cost of \$2,066.59, in addition to the original cost of the wharf, which was built by the Public Works Department.

The total cost of maintaining the lights, fog-alarms, buoys and beacons in the Province of British Columbia for the fiscal year ended 30th June last was \$14,344.90, and the expenditure for construction was \$4,460.84.

Changes in Lightkeepers.

The following new light-keepers have been appointed in the Dominion, during the year ended 1st December, 1890.

LIGHTS ABOVE MONTREAL.

Name of Keeper.	Name of Station.	Date of Appointment by Order in Council.	Salary per Annum.	Remarks.
		1890.	\$	
James W. Maguire...	Corunna Range Lights.....	Aprl. 12..	120	New lights.
J. A. Stoneburner...	Cornwall Canal, Upper entrance	do 12..	100	Lights transferred from Department of Railways and Canals.
J. A. Acton.....	Burnt Island.....	do 12..	250	Succeeded Colise Turcotte, deceased.
Hugh McLaren.....	Brown's Point, Wolfe Island..	do 12..	180	Succeeded Mrs. P. McAvoy, who had been in temporary charge.
Albert E. Malott...	Kingsville.....	do 12..	80	Succeeded W. J. Mallott, deceased.
Louis Cugnet.....	Lamb Island.....	May 27..	400	Succeeded Wm. T. Richards, resigned.
Joseph Davieux...	Batchewana Bay.....	do 27..	350	Succeeded D. Crawford, deceased.
Robert Filson.....	Centre Brother Island.....	do 27..	200	New light.
Thomas Filitreault...	Coteau Landing.....	do 27..	140	Succeeded Eli Prieur, resigned.
Arthur George Clark	Nottawasaga Island.....	July 5..	500	Succeeded G. Collins, superannuated.
Wm. John Martin...	Spanish River.....	do 5..	250	Succeeded Peter Assinawie, who had been in temporary charge.
John Mackillop....	Campbell's Island.....	do 21..	150	Succeeded Mails Cowley, superseded.
Joseph Gibson Dixon	Lake Rosseau.....	do 21..	100	New light.
Frederick Schell...	Gravenhurst Narrows.....	Aug. 20..	100	Succeeded David Schell, who was acting keeper.
Calixte Raymond...	Pointe aux Anglais.....	do 20..	.....	Succeeded E. Charlebois, superseded.
Henry Sullivan...	Kagawong.....	do 20..	72	Succeeded John Gray, resigned.
George Gerard.....	Lamb Island.....	Nov. 4..	400	Succeeded L. Cugnet, resigned.
Wm. Peters.....	Narrow Island.....	do 4..	200	New light.

QUEBEC DIVISION.

J. W. Campbell....	Cape Norman Fog Alarm.....	Aprl. 12..	400	New Fog-Alarm.
Peter Theo. Fraser..	Red Island.....	do 12..	450	Succeeded Elzéar Fraser, deceased.
E. O'Shaughnessy...	Port St. Francis.....	do 28..	.....	Succeeded E. Duval, superseded.
George Fagot.....	Greenly Island.....	June 30..	800	Succeeded L. C. de Beaumont, superseded.
Louis Zeph. Gagné..	East Point Anticosti.....	July 5..	600	Succeeded Thos. Gagné, superannuated.
D. Menard.....	North of Half-Way Point.....	Sept. 12..	170	Succeeded D. Menard, deceased.
A. Houde.....	Cape Charles.....	Nov. 4..	150	Succeeded N. Boisvert, superseded.
Eugène Costin.....	Cape Rosier Light & Fog-Alarm	do 4..	800	Succeeded J. B. Vien, superseded.

NEW BRUNSWICK DIVISION.

M. Quinton	Marks' Point	Aprl. 12..	120	Succeeded Patrick Twomey, resigned.
Mary Flewelling....	Flewelling's Wharf	do 12..	80	Succeeded D. Thomas Flewelling, deceased.
Peter Hagan.....	Ward's Point.....	do 12..	80	New light.

NOVA SCOTIA DIVISION.

Name of Keeper.	Name of Station.	Date of Appointment by Order in Council.	Salary per Annum.	Remarks.
		1890.	\$	
J. Harvey Brownell.	Cold Spring Head	Aprl. 12..	100	New light.
W. B. Smith.....	West Head, Barrington	do 12..	75	Succeeded A. K. Smith, resigned.
John Ehler, 5th....	Crow Harbour.....	May 5..	300	Succeeded Thomas G. Henderson, superseded.
James P. Burke.....	Louisburg	do 27..	350	Succeeded Wm. Burke, who exchanged for position of Fishery Inspector.
Chas. H. Huntley ..	Kingsport Pier.	June 30..	100	Succeeded Thos. J. Phipps, left the country.
B. S. Crowell.....	Page's Island, Port Latour ...	do 30..	100	New light.
Richard Fuller.....	Barrington Lightship.....	July 30..	.....	In temporary charge, in room of J. R. Kenny, superseded.
Hector McRae.....	McKenzie Point.....	Aug. 20..	160	Succeeded John D. McKay, superannuated.
Edward Macpherson	Port Mouton.....	Nov. 3..	300	Succeeded Robt. J. Smith, resigned.
F. H. McNeil.	Grand Narrows.....	do 4..	120	Succeeded S. McNeil, deceased.
John Hardy.....	Gabarus.	do 22..	150	New light.
Wm. Munro	Entrance of Pictou Harbour...	do 22..	400	Succeeded Wm. Ross, deceased.

PRINCE EDWARD ISLAND DIVISION.

James Galvin.....	Brighton Beach Range Lights .	Aprl. 12..	100	New lights.
Cornelius Morrison..	Darnley Point	May 27..	80	Succeeded J. D. Morrison, deceased.
J. P. Wood	Haszard's Range Lights.....	July 5..	130	New lights.

BRITISH COLUMBIA DIVISION.

Robert Gray	Entrance Island	Aug. 20..	600	Had been in charge since 1876.
Wm. David Jones...	Brockton Point.....	do 20..	240	New light.
T. H. Piercy.....	Yellow Island	Nov. 4..	500	do
W. P. Daykin.....	Carmanah Point Light and Fog-whistle.....	do 4..	1,200	A new station, keeper transferred from Race Rocks.

OIL.

A contract was entered into in April last with the Imperial Oil Company of Petrolea, Ont., for the supply of petroleum required for lighthouse purposes, and oil was delivered at the following rates, viz.:—

Delivered at	Per gallon in barrels. Cents.	Per gallon in cases. Cents.
Sarnia.....	15½	21
Hamilton.....	17½	22½
Kingston.....	17½	23½
Montreal	18½	23½
Quebec.....	19	24
St. John, N.B.....	19½	24½
Pictou, N.S.....	20	25
Halifax.....	19½	24½
Charlottetown, P.E.I.....	20½	25½
	==	==

By the terms of the contract the oil is required to be of the best quality of standard white extra refined petroleum, free from acid or other impurities, to weigh at 62° Fah. not less than 7.85 lbs. nor more than 8.00 lbs. per gallon; to withstand a flash test of 115° Fah. by the standard pyrometer, and in all other respects to comply with requirements of the Petroleum Inspection Act. The oil is required to be delivered partly in barrels and partly in cases; barrels to be of the best quality, new, iron-hooped, made of white oak, prepared inside with liquid glue and painted outside; the cases to contain each two cans, each can containing four to five Imperial gallons; cans to be made of best brand of charcoal tin.

The quantity supplied to the lights above Montreal during the past fiscal year was 21,837 gallons; to the lights in the Quebec district, 23,015 gallons; to the Nova Scotia district, 53,643 gallons; to the New Brunswick district, 15,018 gallons; to the Prince Edward Island district 4,440 gallons, and the lights in British Columbia 2,800 gallons—making in all 120,753 gallons.

The oil for British Columbia is American, it being found in the public interest to purchase high test oil of that description for the lights in that province. A small quantity of American oil was also purchased for the service of the dioptric lights in the Lower Provinces, as the Canadian oil is not found to be suitable for such lights.

DOMINION STEAMERS.

The steamers under the control of this Department consist of the screw steamer "Napoleon III;" the "Druid," paddle wheel; the "Newfield," screw; the "Lansdown," screw; the "Alert," screw; the "Stanley," screw, and the "Bayfield," screw, and the small steam launch "Dolphin," employed at Quebec in connection with the River Police Force, and also the "Sir James Douglas," screw, with her small steam launch tender.

The steamer "Napoleon" was employed during the past season in supplying the lights in the River and Gulf of St. Lawrence, Strait of Belle Isle and Baie des Chaleurs, and also attended to buoy service and served for a period in the Traverse on the opening of navigation as a lightship. During the past fiscal year the sum of \$4,190.33 was expended in repairs to the hull and engines of this vessel.

On the 18th October last the "Napoleon," after visiting Cape Ray Light, while endeavouring to enter Little Glace Bay for shelter grounded on a flat rock in 7 feet of water and became a wreck. As the vessel, notwithstanding her age, was in good condition, owing to repairs and improvements which had been made during the past few years, and having had modern engines and boilers put in her about four years ago, it was deemed advisable to raise and repair her if possible, and a contract was entered into with Messrs. McDonald & Co., of Halifax, to float, dock and thoroughly repair the vessel for the sum of \$37,000.

The steamer "Druid" was employed during the past season in attending to the gas and other buoys in the River St. Lawrence, and supplying a number of the river lights. During the past fiscal year the sum of \$5,060.43 was expended in repairs to the hull and engines of this vessel, and she is now in fairly good condition.

The steamer "Newfield" was engaged from 12th November, 1889, in visiting Sable Island and attending to lighthouse and buoy service until 22nd January last, when the crew was paid off and the ship was laid up for the winter. On the 26th March she began buoy service and was occupied in lighthouse and buoy service until the 8th July, when she was placed on the Marine slip at Halifax and her bottom scraped and painted. On the 14th July she resumed lighthouse service, and was employed until the 2nd August, when she entered on cable service, and continued in this work in the Gulf of St. Lawrence and Bay of Fundy until 30th September, when she again resumed lighthouse service. The sum of \$4,650.91 was expended in repairs to this vessel.

The steamer "Alert" was not employed in active service during the past season until the occurrence of the casualty to the "Napoleon," when it was deemed advisable to fit her up and despatch her to Quebec to attend to the work there usually performed by the "Napoleon." During the past year the sum of \$3018.17 was expended in repairs to the hull and machinery of this vessel.

The steamer "Lansdowne" was put in commission on the 19th April, and was employed during the past season in buoy and lighthouse service both in the New Brunswick and Nova Scotia divisions. The sum of \$2,752.19 was expended on repairs to this vessel during the past fiscal year.

The steamer "Stanley," which is employed for the maintenance of winter communication between Prince Edward Island and the mainland, began work on the 18th December, 1889, and made her last trip to Pictou on the 24th April, 1890, during which time she made seventy round trips and one half trip. On 10th February, 1890, the steamer laid up to clean boilers at Georgetown, and on the 22nd February attempted to reach Pictou, but could not get any further than Cape Bear, and was obliged to return to Georgetown. On the 24th February she crossed to Pictou, and on the 25th attempted to cross to Georgetown, but was caught in heavy ice off Pictou, and did not get clear for two days. She carries the mails between Pictou and the Island in the winter, but receives no pay from the Post Office Department for the performance of this service. The gross earnings for the season amounted to \$10,560.36. During the past summer the "Stanley" has been employed in connection with the Fisheries Protection Service. The sum of \$2,693.65 was expended on repairs during the last fiscal year.

As stated in the last annual report, tenders were invited for the purchase of the steamer "Northern Light," which had formerly been employed in connection with the winter service and had become unfit for further work. The tender of Messrs. E. Lantallum & Co., of St. John, N.B., for \$4,559, for the purchase of the vessel, was duly accepted and the amount of purchase money deposited to the credit of the Receiver-General on 28th March last.

The steamer "Sir James Douglas," stationed at Victoria, B.C., was put in commission on the 15th March last, and was employed in attending to the lighthouse and buoy service in British Columbia, with the exception of eleven days, when she was employed under charter by the Canadian Pacific Railway Company in special cable service. The sum of \$1,142.61 was expended in repairs to this vessel, but owing to her age and condition, a new boiler being required and the hull not being considered worth such expenditure, and as she is too small for the work required, it has been deemed advisable to procure a new vessel for lighthouse service in this Province. An appropriation was made by Parliament at its late session of the sum of \$70,000 for a suitable vessel, and tenders were invited in July last, both in Canada and the United Kingdom, for a steel-screw steamer of the following dimensions, viz.: length, 170 feet; breadth, 31 feet; and depth, 13.6 feet. Tenders were also invited in British Columbia for a wooden steamer of similar dimensions.

Ten tenders for a steel steamer, three for a wooden steamer and one for a composite steamer were received, and that of Messrs. Fleming & Ferguson, of the Phoenix Works, Paisley, G.B., who offered to build and supply a steel steamer delivered on the Clyde for the sum of £15,000 sterling, being the lowest and most advantageous, was accepted. The vessel is to be supplied with quadruple expansion engines, and to class 100 A1 under Lloyd's special survey, and to be delivered complete in the beginning of June next.

The "Bayfield" is a wooden steamer of 150 tons gross and 94 tons register, and is employed for the purposes of the hydrographic survey of the Georgian Bay, now being conducted by Staff Commander Boulton, R.N., an experienced surveyor of the British Admiralty.

The amount expended during the fiscal year ended 30th June last, for the maintenance of "Napoleon III" was \$17,097.44; "Druid," \$13,531.65; "Lansdowne," \$17,735.52; "Newfield," \$18,241.98; "Alert," \$3,060.67; "Stanley," \$24,566.01; "Northern Light," \$590.47; "Sir James Douglas," \$11,260.58—making a total expenditure (together with an outstanding claim of \$8,844.32, which has been paid for extras in connection with construction of steamers "Princess Louise" and "Lansdowne") of \$114,959.20. The amount appropriated for this service was \$137,000.

ICE-BOAT MAIL SERVICE.

This service was organized on 31st January, and the iceboat crews were retained until the 10th March. The first boat crossed on the 31st January, and 45 trips were made during February and 15 in March. During the period the service continued 60 passengers and 1,629 mail bags were carried over. The gross earnings amounted to \$161.46, and the expenditure for the fiscal year amounted to \$2,752.67. Of this amount the sum of \$2,499.79 was paid for wages of boat crews

and extra trips. No remuneration was received by the Marine Department from the Post Office Department for the performance of this service.

HARBOUR POLICE.

As stated in the last annual report, the Harbour Police Force stationed at Montreal for the purpose of keeping order among shipping was permanently disbanded on the 30th November, 1889. The tonnage duty of 3 cents per ton register imposed under the provisions of Chapter 90, Revised Statutes, was collected at Montreal until the disbandment of the force. The dues, however, are still in force at the port of Quebec, and the River Police still maintained there in the interests of shipping. With a view, however, of reducing the large expenditure of past years at this port on account of River Police service, and bringing the expenditure as near as possible to the receipts, the force for the past two seasons has been reduced, but it has proved quite sufficient for the requirements of the service.

The force at Quebec, which is under the charge of Mr. J. U. Gregory, Agent of the Department, was constituted during the past season as follows, viz: 1 chief constable at \$2.40 per diem, 4 coxswains at \$1.90 per diem, 14 constables at \$1.50 per diem, and 1 engineer at \$50 per month. On the 1st May 14 men were sworn in for service, and on the 8th May 6 additional men, but on 31st July 1 constable left, and it was not considered necessary to replace him. On the 13th November, as navigation was drawing to a close, and there was comparatively little shipping in port, it was deemed advisable to discharge all the constables, excepting the chief constable and coxswains, who were discharged on 30th November, when the force was disbanded for the season.

The report of the agent as to the efficiency of the force during the past season appears as an appendix to this report. It will be seen by reference thereto that crimping is reported as carried on to a considerable extent, and the efforts of the force were exerted towards its suppression.

The total amount expended in connection with the maintenance of the force at Quebec for the fiscal year ended 30th June last was \$8,620.61, while the dues collected amounted to \$10,252.77.

At the Port of Montreal the expenditure amounted to \$13,167 and the receipts from dues to \$7,564.18. It will thus be seen that the total expenditure for this service amounted to \$21,787.61, and the dues collected to \$17,816.95, showing an excess of expenditure over receipts of \$3,970.66.

The receipts and expenditure on account of this service during the past 21 years are as follows, viz.:—

			Receipts.	Expenditure.
For fiscal year ended 30th June, 1870.....	\$	23,996	68	\$ 18,461 83
do do 1871.....		21,235	06	17,400 73
do do 1872.....		27,215	80	20,348 00
do do 1873.....		26,618	50	32,653 87
do do 1874.....		28,650	39	38,897 52
do do 1875.....		25,620	09	37,895 00
do do 1876.....		26,499	09	41,222 68
do do 1877.....		28,598	10	35,006 37
do do 1878.....		26,702	43	37,560 14

		Receipts.	Expenditure.
For fiscal year ended 30th June, 1879.....		21,464 97	38,486 50
do do 1880.....		21,510 15	35,225 54
do do 1881.....		27,375 09	35,451 07
do do 1882.....		21,420 33	42,316 56
do do 1883.....		28,060 02	38,318 65
do do 1884.....		28,497 25	41,980 72
do do 1885.....		20,698 79	38,082 92
do do 1886.....		24,089 97	43,916 57
do do 1887.....		22,934 49	40,340 12
do do 1888.....		21,072 73	37,279 52
do do 1889.....		19,688 27	31,647 50
do do 1890.....		17,816 95	21,787 61
		<u>\$509,765 15</u>	<u>\$724,279 42</u>
Deduct receipts from expenditure.....			509,765 15
			<u>\$ 214,514 27</u>

During the past season representations were made by the Quebec Board of Trade that the force employed was not sufficient for the usual inspection circuit, but it was pointed out that the force was adequate when confined to their legitimate duties, and that at the port of New York, with its immense shipping, the number of patrolmen was but 30 and at Boston only 20 men. The correspondence with the Board on the subject forms an appendix to this report.

SICK AND DISTRESSED MARINERS.

Under the provisions of Chapter 76, Revised Statutes, a duty of 2 cents per ton register is levied on every vessel arriving in any port in the Provinces of Quebec, Nova Scotia, New Brunswick, Prince Edward Island and British Columbia, the money thus collected forming "The Sick Mariners' Fund." Vessels of the burden of 100 tons and less pay the duty once in each calender year, and vessels of more than 100 tons three times in each year.

By an amendment to this Act passed at the Session of Parliament in 1886, 50-51 Vic., chap. 40, it is provided that no vessel which is not registered in Canada, and which is employed exclusively in fishing or on a fishing voyage, shall be subject to the payment of this duty.

The receipts for the fiscal year ended 30th June last amounted to \$47,881.75, being an increase as compared with the receipts of the preceding year of \$8,575.46. This increase is principally derived from the Provinces of Quebec and Nova Scotia, the increase in Quebec amounting to \$4,835.43, and in Nova Scotia to \$2,869.73.

The Sick Mariners' Act does not apply to the Province of Ontario, and consequently no dues are collected from vessels in that Province, and no expenditure is incurred on account of sick seamen. For a number of years past, however, a grant has been made by Parliament of \$500 to the General Hospital at Kingston, and a similar amount to the General and Marine Hospital at St. Catharines, for the care of

such seamen as may be received. As stated in report of last year, a per diem rate for the actual number of sick seamen treated and cared for in these hospitals is now allowed out of these votes.

In the Province of Quebec the expenditure on account of sick and distressed seamen, including the expenditure for the Marine and Immigrant Hospital at Quebec, amounted to \$15,521.75, while the expenditure for the preceding year amounted to \$23,388.57, showing a reduction in expenditure for the last year of \$7,866.82. Of the sum expended, \$124.83 was paid for shipwrecked and distressed seamen, and \$2,447.54 for sick seamen at ports other than Montréal and Quebec.

At the port of Montreal sick seamen are cared for at the General Hospital and Notre Dame Hospital, under an arrangement made by the Department, by which 90 cents per diem is paid for board and medical attendance of each seaman. The amount paid the Montreal General Hospital during the past fiscal year was \$1,115.10, and Notre Dame Hospital \$1,555.20. The Sick Mariners' dues collected at the port of Montreal during the same period amounted to \$4,154.66.

At the port of Quebec sick seamen were cared for at the Marine and Immigrant Hospital until 31st December last, when the hospital was closed, and since that period they have been cared for at the Jeffrey Hale and the Hotel Dieu Hospitals, the sum of 90 cents per diem being allowed for the board and medical attendance of each seaman. The sum of \$10,279.18 was expended during the past fiscal year in connection with the Marine and Immigrant Hospital. By reference to the last annual report it will be seen that for the reasons therein stated it was deemed advisable to admit no residents to the hospital from and after 1st July, 1889, and to receive no further contributions from the Local Government for the support of residents. By Order in Council of 28th June, 1889, it was also decided to dispense with the services of the Commissioners and visiting physicians.

By Order in Council of the 4th February last it was decided to close the Marine Hospital, as at that time there were no patients in the hospital, and since the close of navigation no sick mariners had applied for admission. As a hospital for sick mariners, the building had been found to be unsuitable, it being too large and expensive to maintain for the comparatively small number of sick mariners requiring attention at the port of Quebec. It had also been ascertained that sick mariners could receive the best of care, board and medical attendance at some of the hospitals in Quebec at the rate of 90 cents per diem.

This hospital was formerly the property of the Province of Quebec, and became vested in the Government of the Dominion at Confederation, and was originally built to accommodate a large number of patients, including immigrants, residents of Quebec and sick mariners, and could probably accommodate 300 or 400 patients. Although no longer required to be maintained as an hospital by the Dominion Government for the care of sick seamen, it would suit admirably for the purposes of a public hospital, and it was offered to the Province of Quebec on certain conditions for such an hospital, but the offer was not accepted. A similar offer has been made to the Corporation of the city of Quebec, and the subject is still under the consideration of that body.

In connection with the closing of the hospital referred to, a gratuity of two years' salary, amounting to the sum of \$1,200, was allowed, by Order in Council of the

17th December, 1889, to Doctor P. A. Wells, secretary to the Commissioners, on dispensing with his services. A gratuity of \$2,000 was also allowed to Dr. L. Catellier, who had served as resident physician for a period of 25 years, and whose salary was \$800 with the board of himself and family. A gratuity of \$300 was also allowed Mrs. Mossman, the matron.

The sick mariners' dues collected at the port of Quebec during the last fiscal year amounted to \$9,284.50, being \$3,231.42 in excess of the previous year, and the total collections for the entire Province, for the same period, amounted to \$15,595.79, being in excess of the previous year by the sum of \$4,835.43. The expenditure, as above stated amounted to \$15,521.75.

The expenditure on account of sick and distressed seamen in the Province of New Brunswick for the last fiscal year amounted to \$7,568.78 and the collection of dues to \$10,072.50. Marine hospitals have been established for a number of years at the Ports of St. John, St. Andrews, Miramichi, Richibucto, Bathurst and Sackville.

The collections at the port of St. John amounted to \$5,135.76, and the cost of maintenance of the Marine Hospital amounted to \$3,449.26 in addition to certain expenditures by the Department of Public Works on the building and for other purposes.

In the Province of Nova Scotia, Marine Hospitals have been established at the ports of Yarmouth, Pictou, Sydney, Lunenburg and Point Tupper. At Halifax provision is made for the care of sick seamen at the Provincial and City Hospital, under arrangements made with the managers, by which the sum of 90 cents per diem is allowed for board and medical attendance of each seaman. The sum of \$7,995.20 was collected at Halifax as sick mariner's dues during the past fiscal year, and the sum paid the Provincial and City Hospital amounted to \$4,752.60. At ports in Nova Scotia, as in other Provinces, where no hospitals are established, sick seamen are cared for under the direction of the Chief Officer of Customs, if the vessels to which the seamen belonged paid dues at such port. It has been contended that a vessel paying dues at any port in the Dominion is entitled to the relief of her sick seamen at any other port; but this Department acts upon the construction that relief can be extended only at the port where the dues have been paid. The subject is at present under the consideration of the Department of Justice. The total expenditure for sick, disabled and distressed seamen in Nova Scotia, for the past fiscal year amounted to \$12,233.47 and the receipts to \$16,949.82, showing an excess of revenue over expenditure of \$4,716.35.

In the Province of Prince Edward Island the expenditure on account of sick, disabled and distressed seamen for the last fiscal year amounted to \$1,112.08 and the receipts to \$467.36. Sick seamen at Charlottetown are cared for at the Prince Edward Island and Charlottetown hospitals under arrangements made with the managers of these institutions, at the same rate as is paid to the public hospitals in other parts of the Dominion.

In the Province of British Columbia the sum of \$3,123.19 was expended, and the receipts for the past fiscal year amounted to \$4,796.28.

During the past fiscal year the sum of \$1,345.95 was paid to Her Majesty's Government to reimburse expenses incurred in caring for shipwrecked and distressed Canadian seamen in foreign ports.

The total expenditure by this Department on account of sick and distressed seamen during the past fiscal year amounted to \$41,729.11, being \$10,603.23 less than the expenditure of the preceding year, and \$9,270.89 less than the amount appropriated by Parliament for the service. The dues collected amounted to \$47,881.75, and it will be seen that the revenue exceeded the expenditure by the sum of \$6,152.64.

The receipts and expenditure in connection with this service during the preceding 22 fiscal years are as follows:—

			Receipts.	Expenditure.
For fiscal year ended 30th June, 1869.....			\$31,353 78	\$26,987 64
do	do	1870.....	31,410 46	27,029 34
do	do	1871.....	29,683 41	28,971 22
do	do	1872.....	34,911 64	38,947 60
do	do	1873.....	37,136 10	41,016 43
do	do	1874.....	41,500 16	59,778 90
do	do	1875.....	37,801 46	50,684 76
do	do	1876.....	41,287 66	48,828 49
do	do	1877.....	43,739 21	51,647 94
do	do	1878.....	44,665 07	43,780 90
do	do	1879.....	37,779 57	42,729 36
do	do	1880.....	42,523 20	42,160 91
do	do	1881.....	49,779 72	40,667 52
do	do	1882.....	45,951 47	39,359 11
do	do	1883.....	45,573 42	36,249 65
do	do	1884.....	48,667 07	39,553 58
do	do	1885.....	39,068 39	44,501 57
do	do	1886.....	40,848 05	50,377 62
do	do	1887.....	42,334 92	37,447 35
do	do	1888.....	41,669 64	36,447 85
do	do	1889.....	39,306 29	41,320 59
do	do	1890.....	47,881 75	41,729 11
			<hr/>	<hr/>
			\$894,872 44	\$910,217 44
Deduct receipts from expenditure.....				894,872 44
				<hr/>
Excess of expenditure over receipts.....				\$15,345 00
				<hr/>

METEOROLOGICAL SERVICE.

The report of the Meteorological Service by the Director, Mr. Carpmael, extending from the 1st December, 1889, to the 30th September, 1890, forms an appendix to this report. During the period referred to seven stations in Ontario, three in Quebec, one in Nova Scotia, one in New Brunswick, four in Manitoba, five in the North-West Territories and one in British Columbia have been added to the list, and two stations have ceased to report; 723 warnings of approaching storms were issued, of which 553 were verified. The issue of weather forecasts was continued

without interruption, and published in the newspapers in Ontario, Quebec and the Maritime Provinces. The sum of \$56,100 was appropriated for this service, and the expenditure amounted to \$52,967.92.

Her Majesty's Government having represented the expediency of establishing a Metereological Station at Bermuda, when the telegraph cable between these islands and Halifax had been laid, it has been decided to pay half the expense of establishing and maintaining the proposed station. The cost to the Dominion of establishing the station is £10 10s. sterling, and for the annual expences of maintenance, £10. It is expected that the benefit to be derived from the establishment of the station will many times more than repay Canada for the whole cost of maintenance.

OBSERVATORIES.

The annual reports of the Director of the Magnetic Observatory at Toronto, and the observatories at Quebec, Kingston, Montreal and St. John, are attached to the report on the Meteorological Service. The sum of \$4,484.18 was expended on the magnetic observatory at Toronto, and \$500 for each of the observatories at Kingston and Montreal. The total expenditure on account of the Meteorological and Observatory Services for the past fiscal year amounted to \$58,452.10.

GEORGIAN BAY SURVEY.

The report of Staff Commander Boulton as to the operations of the survey, forms an appendix to this report. The sum of \$18,000 was voted for this service last Session, making, with previous votes, a total appropriation of \$156,000 for the service.

The expenditure for the past fiscal year amounted to \$17,969.23, and the yearly expenditure on this service has been as follows, viz. :—

Year 1882-83.....	\$ 77 81
1883-84.....	26,745 54
1884-85.....	20,454 68
1885-86.....	17,759 36
1886-87.....	21,592 55
1887-88.....	19,468 13
1888-89.....	17,808 46
1889-90.....	17,969 23
	<u>\$141,875 76</u>

REWARDS FOR SAVING LIFE AND LIFE-BOAT SERVICE.

An appropriation of \$10,000 was made by Parliament for the above named service, and the sum of \$8,150.92 has been expended during the last fiscal year. In an Appendix to be published with this report will be found a list of persons to whom rewards and testimonials have been granted by the Government of Canada, and by Her Majesty's Government, and also by foreign Governments, for humane and gallant exertions in saving life at sea, and also of rewards given for saving life on the shores of Canada.

Appendix No. to this report contains a statement of the life-boat stations established in the Dominion, together with particulars as to boats, crews, equipment and services rendered.

A new station was established in June last at Whitehead, in the County of Guysboro', N.S., and it is gratifying to note that on the occasion of the recent stranding of the schooner "Sunbeam" the crew were saved through the efforts of the life-boat crew.

REMOVAL OF OBSTRUCTIONS.

An appropriation of \$6,000 was made by Parliament for the removal of obstructions in navigable waters, and the sum of \$5,737.26 was expended during the last fiscal year. Of this sum \$5,000 was paid Messrs. Fradette & Co., contractors, for the removal of the wreck "Ottawa," and the sum of \$700 was also paid under contract for the removal of the obstruction caused by an old wreck in Grand River, Cape Breton.

SIGNAL SERVICE.

The sum of \$6,000 was voted by Parliament for this service, and the sum of \$4,976.89 was expended during the past year. The report of Mr. H. J. McHugh, inspector of this service at Quebec, forms an appendix to this report. A statement is given in this report of the movements of ice in the Strait of Belle Isle, as noted by the signal agents at Cape Bauld, Belle Isle, Greenly Island, Cape Norman and Point Rich, covering the period extending from December, 1889, to September, 1890.

The subject of ice and ice movements has for some time back received special attention from the Hydrographic Office of the United States, and an interesting report on the subject by Ensign Hugh Rodman, U.S.N., has lately been published by the Hydrographer. It appears from this report that the Hydrographic Office has solicited extensive co-operation on the part of all who would be likely to sight ice, and that special ice forms have been prepared and distributed to Newfoundland sealers, and arrangements also made with lighthouse-keepers of Newfoundland and others to procure and forward information to the Hydrographic Office, so that records may be kept of ice movements. Reference is made in Ensign Rodman's report to the good done by the establishment of the Canadian weather service stations, and this Department is at present in communication with the Hydrographic Office at Washington, with a view to co-operation, in order that the information obtained as to ice movements may be as complete as possible. Great benefit would doubtless result to shipping, and much delay and loss be averted, if accurate information could be obtained as to ice movements.

TIDAL OBSERVATIONS.

The report of Mr. Carpmael, Superintendent of the Meteorological Service, showing what has been accomplished in respect to tidal observations, forms an appendix to this report.

MERCHANT SHIPPING.

LOAD-LINES AND DECK CARGOES.

The figures and tables relating to the number and tonnage of the vessels remaining on the registry books of the Dominion will appear in Supplement No. 1 to this report, as the figures could not be obtained in time for this report proper, registrars of shipping being required by law to report how the registry books stand on the 31st day of December in each year.

An International Marine Conference was held at Washington in 1890, and amongst other subjects under consideration was the subject of a *uniform system of load-marks* or load-line. The committee which had the matter under consideration were of the opinion that the rules adopted by Her Majesty's Board of Trade have proved to be a good standard upon which to determine the proper loading of British vessels which are classed in Lloyd's register, or for other vessels, the particulars of whose strength and fitness to carry any particular cargo can easily be ascertained by the Surveyors of the Board of Trade; but that as regards foreign shipping, which are either not classed in Lloyd's, or the particulars of which cannot be ascertained without a minute examination, the difficulty exists that the law intended to guard against danger from overloading cannot be enforced without serious disadvantages to the owners of ships and cargoes, consequent upon the difficulty of ascertaining whether a ship is fitted to carry the cargoes in question. The committee thought that it would be very desirable if means could be found to ascertain in a simple and easy way, and without loss of time, the fitness of any vessel loading in a port in the United Kingdom to load a particular cargo.

The committee further reported that the laws of many maritime nations contain provisions for dealing with the question of overloading and enabling the local authorities to detain overladen ships; but that nowhere, except in Great Britain, have statutory enactments been introduced for ascertaining whether a ship be fit to carry a certain cargo by a load-mark or load-line; and that in order to arrive at such laws and enforce them it would be necessary to induce the governments of the maritime nations to not only institute investigations similar to the investigations instituted in Great Britain in connection with this subject, but also to establish a staff of competent officials, and establish courts of appeal, authorized to decide on complaints against detentions, and to award damages in case of unjustifiable detention.

The matter appeared to the committee to be surrounded with very serious difficulty, as it would depend upon the varying conditions of each country whether the Government would think it advisable to take steps in the direction indicated or not bearing in mind, always, that a large display of high-class scientific labor and a heavy expenditure of money would be necessary to introduce and operate a system similar to that which is in operation in Great Britain; and in addition to this, the committee were of the opinion that it could be questioned whether it be necessary to make a load-mark law in order to guard against the danger of overloading; because it might be contended that sufficient safeguards are secured by the responsibility of the ship-owners towards the shippers of the cargoes, and by the control exercised by the underwriters and the various institutions for classing ships; and further, that circumstances peculiar to some countries—for instance, the goods exported being light goods, which do not endanger the stability of a ship—would no doubt operate in favour of non-interference on behalf of the respective Governments.

For these reasons the committee were led to believe that, notwithstanding the advantages which would be connected with the introduction of a uniform system of load-marks, the matter was not ripe for consideration by the Conference, and that it should be left as a matter of negotiation between the Governments of maritime nations.

The late Mr. Thomas Gray, formerly Assistant Secretary of the Marine Department of Her Majesty's Board of Trade, was prevented from signing the report by the necessity of his departure from Washington, but had nevertheless expressed his concurrence with its general views. He left the Conference in bad health and went back to London, where he soon after died.

The report of the committee forms an Appendix to this report.

LOAD-LINES.

In 1876 the Imperial Parliament passed an Act amending the Merchant Shipping Act, in which it was provided that every British ship, except ships under 80 tons register, employed solely in the coasting trade, ships employed solely in fishing, pleasure yachts and vessels trading on any inland water of any British possession, shall be permanently and conspicuously marked on each side amidships, so as to indicate the position of each deck which is above water. It was further provided that the owner of every British ship—with the exception of the above-mentioned exemptions—shall, before entering his ship outward from any port in the United Kingdom, mark on each side amidships a circular disc 12 inches in diameter, with a horizontal line 18 inches in length drawn through its centre. The centre of the disc was to indicate the maximum load-line in salt water to which the owner intended to load his ship. There was, however, no formula embodied in the Act for ascertaining the position of the load-line. It was left to the owner's judgment as to where the line should be placed. In 1884 a committee was formed, of which Sir Edward J. Reed was chairman, to consider whether it was practicable to frame any general rules concerning freeboard which would prevent dangerous overloading without duly interfering with trade, and if so, what tables should be adopted and how far such tables could be adopted as fixed rules. In August, 1885, the committee reported to His Grace the Duke of Richmond and Gordon, President of the Imperial Board of Trade, that it was the opinion of the committee the time had come when it was practicable to frame general rules concerning freeboard without unduly interfering with trade, and tables were submitted which it was considered should be adopted. The tables were of the same general form as those adopted up to that time by Lloyd's register office. The committee, in considering the question of making the load-line compulsory according to any given formula which might be adopted, came to the conclusion that it would be necessary to apply the same limitations to vessels under foreign flags as to British vessels when loading in the United Kingdom, and expressed the opinion that it would be impossible to enforce compulsory load-lines on British merchant ships without at the same time requiring their application in British ports to ships under other flags competing with theirs.

No legislation was, however, effected until 1890, when a Bill was introduced in the British Parliament amending the Act of 1876, making the placing of the load-line, in accordance with tables framed by the Load-line Committee, compulsory on all British ships required by the Act of 1876 to have the lines marked before entering outwards from a port in the United Kingdom. As this affected Canadian vessels, and placed them at a disadvantage as compared with vessels sailing under foreign flags, and as numerous influential petitions from owners of Canadian ships had been received by you protesting against the proposed legislation, you communicated with the High Commissioner for Canada in London, with a view of guarding the interests of

Canadian ship-owners. The matter was the subject of much correspondence between the High Commissioner for Canada and Her Majesty's Government, and between yourself and the High Commissioner, and as a concession to Canada a clause was inserted in the Bill providing that if the Canadian Parliament provided by enactment for the fixing, marking and certifying of load-lines on Canadian registered ships the Board of Trade would accept such marking, provided the provisions of the enactment are based on the same principles as the provisions of the Imperial Act of 1890, and are as equally effective for ascertaining and determining the maximum load-lines to which such ships can be safely loaded in salt water. The Bill was finally passed in June last, and forms an Appendix to this report. The Act is compulsory, and applies to Canadian registered ships when entering outwards from a port in the United Kingdom. It does not apply to vessels sailing under foreign flags, nor does it apply to vessels in Canadian ports. The Act provides that the centre of the load-line disc is to be placed at such a level below the deck line as may be approved by the Board of Trade. The position of the disc is to be fixed in accordance with the tables framed by the Load-line Committee appointed before the passing of the Act of 1890. The Board of Trade is to appoint the committee of Lloyd's register of British and foreign shipping, or, at the option of the owner of the ship, any other association for the survey and registry of shipping approved by the Board of Trade or an officer of the Board of Trade and selected by the Board, to certify on behalf of the Board the position of the disc and any alterations thereof. The law in regard to marking the load-line, does not come, into operation, so far as Canadian ships are concerned, until June next.

As the Act referred to places Canadian vessels clearing from ports in the United Kingdom at a disadvantage as compared with vessels sailing under foreign flags, representations have been made to Her Majesty's Government setting forth, amongst other things that ship-owners in Canada were strongly opposed to it, and that a large amount of Canadian tonnage traded to and from ports in the United Kingdom, meeting with sharp competition from vessels of foreign countries, and that as well-built, buoyant Canadian vessels, built of light native wood and of good carrying capacity, are much sought after by citizens of foreign countries for trading purposes, Canadian ship owners are practically competing with Canadian built vessels under the disadvantage of the load-line law. It has also been noted that casualties resulting from overloading are of rare occurrence in the case of Canadian shipping: that this Act requires a large outlay necessary for the highly scientific as well as practical knowledge on the part of the staff for the inspection and successful working of the Canadian legislation contemplated by the Act to ensure the proper fixing of load-lines; and that there is not the same necessity for such marking in the case of Canadian ships which exists in the case of steel or iron-built vessels—Canadian ships, as a rule, being of different dimensions, having greater breadth of beam and depth of hold than obtain in the case of ships built in United Kingdom—Canadian vessels being built with a view to buoyancy and carrying capacity, rather than for their sailing qualities.

The record of Canadian legislation abundantly proves that Canada in the past has not been unmindful of the safety of her mercantile marine, and that she is behind no country in making necessary provisions for the safety of shipping.

DECK CARGOES.

During the Session of the Imperial Parliament held in the early part of the present year, a Bill was introduced by private members, commonly known as the "Plimsoll Bill," to restrict the deck-loading of timber and carriage of live cattle. The object of the Bill was to prevent the arrival of deck cargoes of wood at any port in the United Kingdom after the 1st October, in any year, and before the 16th day of April of the year next following, and to altogether prohibit the importation of live cattle into the United Kingdom from the Continent of America. The Bill did not, however, reach a final stage, and was laid over for future consideration. That part of the Bill which refers to the importation of live cattle became, during recess, the subject of a departmental enquiry under the chairmanship of the Right Honourable H. Chaplin, M.P., President of the Imperial Board of Agriculture, and Her Majesty's Government solicited the comments of the Government of Canada on the provisions of the Bill, as it would probably be re-introduced next Session, and requested the Government of Canada to intimate whether, in the event of the indicated legislation in regard to deck cargoes of wood taking effect in the United Kingdom it would be prepared to initiate similar legislation in Canada, in order to prohibit the exportation of deck cargoes of wood between the 1st October and the 16th day of April. You have represented that the present Canadian deck-load law has operated very satisfactorily—so much so, that no complaints have arisen over loss of life or property in connection with the trans-Atlantic trade since the law bearing on that subject was enacted. In view of the request from Her Majesty's Government you have directed a full enquiry be made into the operation of the present Canadian law relating to timber deck loads and the shipment of live cattle from Canada, the result to be communicated to Her Majesty's Government.

Mr. Plimsoll, in a letter recently received from him by the undersigned, while highly complimenting Canada on the advanced position taken by her at the time of the enactment of the laws regulating the carriage of grain cargoes and deck cargoes of wood, expressed the opinion that Canada, in view of her antecedent action, would adopt the principles of his Bill. I cannot, however, agree with Mr. Plimsoll on that point, as there is a very material difference between the Canadian legislation referred to and the legislation proposed by Mr. Plimsoll. The legislation which Canada effected was to regulate the loading of grain cargoes and limit the carriage of wooden deck cargoes, while Mr. Plimsoll's proposed legislation is prohibitory in its effect as regards deck loads.

I am therefore of the opinion that the present Canadian law, limiting deck cargoes to 3 feet in height of sawn lumber, is a good, safe law, and does not endanger the lives of the crew or the safety of the ship.

I am also of opinion that Canada might, without serious injury to the trans-Atlantic cattle trade, which has assumed very large proportions, legislate to regulate and control, within reasonable limits, the shipment of live cattle from Canada between the 1st September and the 1st May, and provide that each steamer carrying cattle should be inspected by the port warden or some other officer, and be certified that she is in a seaworthy condition for carrying the number of cattle on board, and that the fittings are sufficiently strong for the purpose of protecting the cattle from the inclemency of the weather, and that proper ventilators are provided for the

cattle below deck. During the season of 1890 there were 119,874 live cattle and 48,862 live sheep shipped from Montreal to Europe.

The weather during the fall months of this year has been exceedingly boisterous, and consequently some of the cargoes of cattle shipped by steamers not belonging to the regular lines have suffered very much during the voyage across, and many of such cattle have perished, causing great loss to their owners and underwriters.

If such legislation is provided here it may possibly stop similar legislation in England as regards the Canadian cattle trade, and there is no doubt Mr. Plimsoll has many sympathizers to support him in England in his efforts to prohibit the transport of live cattle across the Atlantic.

STEAMBOAT INSPECTION AND CERTIFICATES TO ENGINEERS.

The annual report of the Board of Steamboat Inspection for the year 1890 forms an appendix to this report. The statement showing certificates granted to engineers of steamboats will be published in the supplement to this report, together with a list of steam vessels inspected and steam vessels not inspected; numbers of passengers allowed to be carried in each passenger steamboat; steam vessels added to the list, and steamers lost or laid up, or rendered unfit for service during the year.

The amount received during the past fiscal year on account of tonnage dues, inspection of steamboats and certificates to engineers was \$19,859.18, of which sum \$19,228.68 was for tonnage dues and inspection fees, and \$570.50 for certificates to engineers. The expenditure, as will be seen by reference to Appendix No. — amounted to \$20,989.52, leaving a deficiency of \$1,130.34.

The following is a comparative statement of receipts and expenditure:

	Receipts.	Expenditure.
For fiscal year ended 30th June, 1870.....	\$12,521 29	\$7,379 18
do do 1871.....	10,369 96	8,321 00
do do 1872.....	11,710 43	8,500 00
do do 1873.....	15,412 75	11,205 54
do do 1874.....	15,603 19	10,291 58
do do 1875.....	15,011 90	12,199 81
do do 1876.....	13,811 24	13,081 86
do do 1877.....	15,858 42	12,073 01
do do 1878.....	12,431 25	13,228 28
do do 1879.....	12,331 16	13,076 46
do do 1880.....	15,424 02	11,854 34
do do 1881.....	16,905 49	12,211 65
do do 1882.....	15,277 78	14,835 97
do do 1883.....	12,577 36	16,209 02
do do 1884.....	15,371 79	21,893 28
do do 1885.....	13,343 66	23,235 04
do do 1886.....	14,087 76	21,775 57
do do 1887.....	12,701 20	22,837 80
do do 1888.....	12,550 14	21,430 45
do do 1889.....	12,576 18	22,313 03
do do 1890.....	19,859 18	20,989 52

295,737 15	319,962 39
------------	------------

Deduct receipts from expenditure.....	295,737 15
---------------------------------------	------------

Balance to debit of fund.....	\$24,225 24
-------------------------------	-------------

The steamer "Quinté," owned by the Deseronto Navigation Company, was discovered to be on fire on the 23rd of October, 1889, while on one of her usual trips

on the Bay of Quinté. The vessel was beached, and became a total loss. She was valued at \$16,000 and was insured for \$12,000. An enquiry was held into the causes which led to the loss of the vessel. Four lives were lost by the casualty.

The Court of Enquiry recommended that the certificates of the master and engineer be suspended.

The nautical adviser of this Department having reported that he was of opinion that this conclusion was unduly severe, and that the cause of the fire had not been clearly ascertained but was apparently inevitable, and that everyone had done his best to save the vessel and the lives of those on board when the accident occurred, you directed that the sentence of the court regarding the captain's certificate be set aside. You deemed the engineer censurable for carelessness in not reporting to his employers the state of his part of the ship, and the danger connected with the fire, and you considered him blameworthy in allowing a fireman to stand his watch alone. The law not providing for the suspension of an engineer's certificate, the sentence of the court touching the engineer was also set aside.

The following entry was made upon the minutes of the Court of Enquiry:—
“Relating to mate of steamer “Quinté” the court finds, from the evidence given, that James Collier, mate of the said steamer, who was at the wheel steering and navigating the steamer while burning, stood at his post and did his duty.”
This finding was confirmed by you.

It was disclosed at the enquiry that the crew of the “Quinté” had not been exercised in lowering and handling the boats, as required by the 29th section of the Steamboat Inspection Act, and proceedings were directed against the owners for not complying with that requirement of the law; the owners of the vessel, pleaded guilty and paid a fine of \$50.

The steamer “Greyhound,” of Toronto, was reported to the Department as having violated the law, by carrying more passengers than her certificate of inspection permitted her, and the matter was referred to the Department of Justice on the 9th July last to prosecute. The case came up before the police magistrate at Toronto, who dismissed the case.

It was reported to the Department that a steamer called the “Enterprise” was carrying passengers on the Maganetawan River without a certificate of inspection. The case was transferred to the Department of Justice in order to prosecute. The case is still pending.

Proceedings were taken by the Department of Justice, at the request of this Department, against the steam ferries “Prince Edward Ferry” and the “Alberta” for running without certificated masters, but the magistrate dismissed both cases. Proceedings were, however, commenced *de novo*.

It was reported to the Department that the steamer “Edith May,” of Toronto, was running as a passenger boat, without a proper equipment and without having paid tonnage dues for two years. The case was referred to the Department of Justice to prosecute, and is still pending.

A small tug steamer, usually employed in the fishing business, called the “Gertrude A. Renney,” appears to have taken a party of fishermen and a boy in an excursion on Sunday, the 13th of July last. The boy was drowned, and as it was reported that the tug had neither a boat nor life-buoy on board, the case was forwarded to the Department to prosecute, if that Department was of the opinion that

the requirements of the Steamboat Inspection Law had not been complied with. The case is still pending.

Information having been received by the Department to the effect that the steamer "Princess Louise," of Kingston, had committed an infraction of the law by carrying a greater number of passengers than was allowed by her certificate, the matter was transferred to the Department of Justice to prosecute. The case is still pending.

Proceedings have been commenced against the steamer "Reindeer," of Kingston, for carrying more passengers than allowed by law.

Proceedings were taken by the Department of Justice against the owner of the steamer "Orillia," upon information furnished this Department, for running the vessel without a certificated engineer. The case came to trial, but was dismissed by the Magistrate who tried it.

It having been reported to the Department that the steam tugs "Wanda" and "Atlas," were running in Baie Verte in violation of the Steamboat Inspection Act, the matter was referred to the Department of Justice to prosecute, if that Department considered that a prosecution would be successful. The matter is still pending.

On February last the office of the Chairman of the Board of Steamboat Inspection was permanently removed to Ottawa.

In May last the services of Mr. W. Russell, Steamboat Inspector for British Columbia, were dispensed with.

Mr. Risley, the late Chairman of the Board, having been superannuated, and Mr. W. J. Meneilly having been appointed chairman in his place, it became necessary to appoint another inspector for Ontario, and Mr. James Johnston, of Owen Sound, was appointed by Order in Council dated the 27th November, 1889.

CERTIFICATES TO MASTERS AND MATES--FOREIGN SEA-GOING.

The report of the Chairman of the Board of Examiners of Masters and Mates of sea-going ships for the year ending 30th November, 1890, will appear as an appendix to this report.

During the past twelve months, as will be seen by reference to the report in the supplement, the Board of Examiners have held meetings for the examination of candidates at the ports of Halifax, N.S., St. John, N.B., Quebec, and Yarmouth, N.S.

One hundred and twenty-one candidates presented themselves for examination at the ports named; 88 succeeded in passing, while 34 failed. Of the 88 that passed, 45 received certificates as master, 40 as mate, and 3 as second mate.

The number of candidates who have passed and obtained sea-going masters' certificates of competency since the Act went into operation, viz., 16th September, 1871, to the 30th November, 1890, is 1,739, and the amount paid for certificates, at the rate of \$10 each, \$7,390. During the same period 1,154 candidates received certificates of competency as mate, and the amount paid, at the rate of \$5 each, was \$5,170.

In the supplement referred to a list will be found of all who have obtained certificates of competency and service, either as master or mate, from the 30th November, 1889, to the 30th November, 1890.

During the twelve months no certificates of service-foreign sea-going have been granted. The total number of certificates of service issued since the Act came into operation is 947 for the grade of master and 380 for that of mate, making a total of 1,327 certificates of service granted. The fee charged for certificates of service is at the rate of \$5 for master and \$3 for mate.

INLAND AND COASTING CERTIFICATES.

During the twelve months ended 30th November, 1890, the number of candidates who have passed and obtained master's certificates of service is 68, and the amount paid for their certificates, at the rate of \$4 each, was \$272. During the same period 21 candidates applied for certificates of service as mate, and the amount paid, at the rate of \$2 each was \$42. The number of applicants for certificates of competency as master was 101, and the amount paid, at the rate of \$8 each, \$808. Forty-seven applied for certificates of competency as mate, and the amount paid, at the rate of \$4 each, was \$188. The amount received for renewed certificates of competency and service was \$20, making a total of \$1,310 received from masters' and mates' inland and coasting certificates.

A list of certificates issued during the twelve months ended 30th November, 1890, will be found Supplement No. 1 to this report.

The total amount of fees received on account of certificates of competency and service, both sea-going and inland and coasting, during the fiscal year ended 30th June last, amounted to \$2,186, and the amount in detail expended on account of this service, as will be seen by reference to Appendix No. 1 to this report, was \$4,117.83. The amount voted by Parliament for this service was \$6,000, and the sum expended to 30th June, 1889, \$4,117.83, leaving an unexpended balance of \$1,882.17. A list of certificates cancelled during the last twelve months will also be found in the supplement to this report:—

The following statement shows the total receipts and expenditure an account of masters and mates since, 1871.

	Expenditure.	Receipts.
For fiscal year ended 30th June, 1871.....	\$ 1,410 45	.....
do do 1872.....	4,312 07	\$ 1,344 00
do do 1873.....	6,466 18	4,963 00
do do 1874.....	4,520 19	2,995 00
do do 1875.....	5,696 62	2,715 00
do do 1876.....	4,672 08	2,021 87
do do 1877.....	4,050 00	1,740 50
do do 1878.....	4,249 76	1,296 50
do do 1879.....	4,250 12	1,334 50
do do 1880.....	4,253 43	1,547 00
do do 1881.....	3,888 41	1,333 50
do do 1882.....	3,965 19	1,152 50
do do 1883.....	4,021 20	1,314 00
do do 1884.....	3,909 59	9,437 50
do do 1885.....	4,324 15	2,897 00
do do 1886.....	5,245 28	2,152 00
do do 1887.....	4,855 98	2,172 00
do do 1888.....	5,060 96	3,220 80
do do 1889.....	4,381 04	2,202 00
do do 1890.....	4,117 83	2,186 00
	<hr/>	<hr/>
Receipts.....	\$90,650 53	\$48,024 67
	<hr/>	<hr/>
Excess of expenditure over receipts.....	\$42,625 86	

The services of Capt. Thos. Killam, examiner of applicants for foreign deep-sea certificates at Yarmouth was dispensed, with by an Order in Council dated the 9th January, 1890. No examiner was appointed in his place, as Capt. Smith, the Chair-

man of the Board, found he could perform the work at Yarmouth without the assistance of an examiner.

Capt. Thomas Donnelly, the Inspector of Hulls at Kingston, was appointed the Examiner of Masters and Mates by an Order in Council dated the 12th September last, for the purpose of examining applicants for certificates on the inland waters.

WRECKS AND CASUALTIES.

The total number of casualties to British, Canadian and foreign sea-going vessels reported to the Department as having occurred in Canadian waters, and to Canadian sea-going vessels in waters other than those of Canada, during the 11 months ended 31st October, 1890, was 229, representing a tonnage of 74,402 tons register, and the amount of loss, both partial and total, to vessels and cargoes, so far as ascertained, was \$1,134,966.

The number of lives lost in connection with these casualties was 57.

The disasters reported to this Department as having occurred to vessels on the Inland waters of Canada and to Canadian vessels on American inland waters during the 11 months ended 31st October, 1890, were 13, and the tonnage involved was 3,941 tons register; and the amount of loss, both partial and total, to vessels and cargoes, so far as estimated, was \$59,550. The number of lives lost in connection with these casualties was 7.

When the Wreck Register was closed in 1889 a large number of casualties had been reported of which the Department had not sufficient particulars to enable it to publish them in the list for that year. Returns have subsequently been received for many of these casualties, and a detailed list of them will be found in the supplement to this report. These casualties have been added to those previously reported, with the result of largely increasing the totals for 1889.

COMPARATIVE STATEMENT of the Losses reported to the Department since 1870 :

		Casualties.	Tonnage.	Lives Lost.	Damage.
For the year ending 31st December, 1870.....		335	82,808	210	901,000
do do 1871.....		274	81,035	81	2,100,000
do do 1872.....		290	99,109	237	2,507,338
do do 1873.....		350	99,523	*813	2,844,133
do do 1874.....		308	106,682	109	2,029,965
do do 1875.....		286	99,427	78	2,468,521
do do 1876.....		452	153,368	404	2,942,955
do do 1877.....		468	177,896	153	3,952,582
do do 1878.....		414	161,760	187	3,445,875
do do 1879.....		533	198,364	339	4,119,233
do do 1880.....		445	179,993	217	3,820,652
do do 1881.....		440	210,719	399	4,982,423
do do 1882.....		451	193,655	271	3,138,423
do do 1883.....		366	158,826	259	2,029,752
do do 1884.....		324	119,741	253	2,965,321
do do 1885.....		346	144,726	198	2,753,667
do do 1886.....		377	150,277	54	1,950,799
do do 1887.....		335	149,395	91	1,662,688
do do 1888.....		319	105,060	52	1,126,124
For 11 months ended 30th November, 1889.....		268	110,716	163	1,554,319
do 31st October, 1890... ..		242	78,343	64	1,194,516

*Of this number, 545 persons were lost by the wreck of the steamship "Atlantic" on the 1st of April, 1873.

On the 28th of August, 1889, a deck hand named Charles Hamley was tarred and feathered on board the steamship "Baltic" while on a voyage to Warton, Ontario. The subject of this outrage jumped overboard and was drowned. On the 4th March, 1890, an Order in Council issued appointing Lieut. A. R. Gordon, R.N., a Commissioner to hold a formal investigation into the conduct of the master of the "Baltic," Mr. W. Tait Robertson, in connection with the outrage, and subsequent death of the victim. The court was of the opinion that no proper efforts were made to rescue the unfortunate man who had fallen overboard, and that Capt. Robertson had failed to comply with the requirements of the Steamboat Inspection Law in regard to exercising his crew in lowering and handling the boats. Capt. Robertson's certificate as master was suspended for twelve months from the 4th March, 1890.

On the 17th July last a collision occurred between the United States steamer "St. Lawrence" and the Canadian steam yacht "Catharine," by which five of the party on board the "Catharine" were drowned. Capts. M. P. McElhinney and Thomas Donnelly were appointed Commissioners to hold an inquiry into the causes which led to this disaster. The court was of the opinion that the master of the "Catharine," Capt. Joseph Senecal, was mainly to blame for the casualty, and his Canadian certificate was suspended for a period of twelve months. The "Catharine" was sunk and became a total loss. She was 10 tons register, eight years old, owned by the master, and was probably worth \$800. The "St. Lawrence" received little or no damage.

The wooden ship "Tanjore," of Quebec, 12 years old and 915 tons register tonnage, was stranded at Little River, on the coast of Maine, U.S.A., on the night of the 22nd of January last while on a voyage from St. John, N.B., to Swansea, with a cargo of lumber. The vessel was subsequently taken to St. John and repaired. The amount of the damage has not been ascertained; no lives were lost by this casualty. An enquiry was held at St. John, N.B., by Capt. W. H. Smith, R.N.R., into the causes which led to the stranding of this vessel. The court found the master, M. G. L. Ritchie, guilty of wrongful acts and defaults, and suspended his Canadian certificate of competency as master for a period of six months from the 22nd January, 1890.

A collision occurred between the Government steamer "Lansdowne" and the Schooner "Blanche," of Sydney, C.B., on the 7th May last. Capt. W. W. Smith, R.N.R., was appointed a Commissioner to enquire into the causes which led to the collision, by an Order in Council dated the 27th May, 1890. The court found that the collision was caused by the master of the "Lansdowne" leaving the wharf while there was a strong freshet and setting down the harbour carrying the steamer across the bows of the schooner, the latter being at anchor at the time. The owner of the schooner claimed \$1,912. This claim was considered excessive by the Department. A settlement has, however, been effected, and the owner has accepted the sum of \$1,400 in full of all claim for the damage.

On the 18th October, 1890, the Government iron steamer "Napoleon III," 749 tons, while proceeding from Cape Ray, Nfld., to Sydney, C.B., was driven ashore on the north side of the entrance to Little Glace Bay during a severe gale. No lives lost. A contract has been entered into with Macdonald & Co., of Halifax, for

\$37,000, to get her off and repair her. Capt. McElhinney, nautical adviser to the Department, and Lieut. Gordon, R.N., have been appointed a Court of Enquiry to enquire into the causes which led to the stranding.

On the 18th October, 1890, the Yarmouth ship "Dunrobin," 16 years old, 1,375 tons, on a voyage from Perth Amboy to Rotterdam, stranded on Banjaard Rocks, and became a total wreck. Loss: vessel, \$25,000; cargo, \$45,000. No lives lost.

On the 15th October, 1890, the ship "Fearnought," 31 years old, 1,292 tons, was abandoned at sea while on a voyage from St. John, N.B., to Fleetwood, G.B. No lives lost; vessel and cargo worth \$20,000.

On the 9th June, 1889, the barque "Ecuador," of Yarmouth, N.S., 1,059 tons, 14 years old, was lost on Cape Castello, Brazil, while on a voyage from Buenos Ayres to Barbadoes. The vessel was valued at \$20,000. No lives lost.

On the 8th August, 1889, the brig "Advance," of Halifax, 234 tons, 5 years old, sailed from Perth Amboy, U.S., for St. John's, Porto Rico, and has not since been heard of. She had a crew of nine men in all. Valued at \$7,500.

On the 10th September, 1889, the barque "Thomas Keillor," of Dorchester, N.B., 1,095 tons, 14 years old, stranded at Delaware Bay, U.S., while on a voyage from Philadelphia to London, and became a total wreck. Loss \$20,000. No lives lost.

On the 1st October, 1889, the iron steamer "Geographique," of Antwerp, 2,866 tons, 19 years old, on a voyage from Montreal to Southampton, was run into and sunk by the "Minnie Swift," off St. Pierre Miquelon. Loss: vessel, \$85,000; cargo, \$35,000. Four lives lost.

On the 31st August, 1889, the schooner "Conductor," of Lunenburg, 114 tons, 7 years old, sailed from Turk's Island, for Lunenburg, with a crew of 7 men on board, and has not since been heard of. Vessel was valued at \$5,000; cargo, \$400.

A fire occurred on board the iron steamship "Canopus," of Liverpool, England, on the 18th September, 1889, while in the Gulf of St. Lawrence on a voyage from Montreal to Liverpool, and caused damage to the ship to the extent of \$75,000 and to the cargo \$50,000. The steamer put back to Quebec, and after some temporary repairs were made again sailed for Liverpool on the 1st October, 1889, and shortly after leaving Quebec stranded on St. Valier Reef, causing further damage to the vessel to the extent of \$50,000 and to cargo of \$20,000. The "Canopus" was 18 years old, and 2,808 tons register.

On the 26th November, 1889, the ship "Nylghau," of Yarmouth, 8 years old, 1,252 tons, stranded on Pratta Shoal, China Sea, while on a voyage from Singapore to Hong Kong. Seven of the crew were lost. The vessel became a total wreck. Valued at \$32,000.

On the 15th January, 1890, the barque "Emilie L. Boyd," 9 years old, 1,240 tons, was sunk by a collision with the Norwegian ship "Rolf" while on a voyage from New York to Hong Kong. Total loss \$40,000.

On the 9th January, 1890, the new schooner "Laburnam," of Shelburne, N.S., 115 tons, sailed from Halifax for Porto Rico, and is supposed to have upset off Halifax. Six of a crew were on board. Loss: vessel and cargo, \$10,000.

On the 16th September, 1890, the iron steamer "Princess Beatrice," 16 years old, 270 tons, owned in Halifax, ran ashore at or near Isaac's Harbour, N.S., and became a total wreck. Loss: vessel and cargo, \$20,000.

On the 7th March, 1890, the barque "Laura," of Chatham, N.B., 30 years old, 349 tons, sailed from Bordeaux, France, for St. John, N.B., and has not since been heard of. She had on board a crew of 9 men, and was valued at \$5,000.

On the — October, 1890, the barque "Melmerby," of Liverpool, G. B., 1,487 tons, 26 years old, while on a voyage from Quebec to Greenock, became disabled and water-logged in the Gulf of St. Lawrence in the gale of 5th October, 1890. After drifting about for some days, on the 12th October she was driven ashore at Roy's Island Beach, Pictou County, N.S., and became a total wreck. Vessel and cargo worth \$30,000. Fifteen lives were lost by this casualty.

On the 17th May, 1890, the schooner "Jessie H. Breck," of Kingston, Ont., 17 years old, 305 tons, while on a voyage from Port Dalhousie to Kingston capsized and sank two miles south-west of Nine Mile Point, off Simcoe Island. Five lives were lost. Loss, \$5,000.

During the last year but one wreck occurred at Sable Island, viz., that of the Norwegian bark "Gorda," of Drammen, Norway, 15 days out from Barbados, loaded with sugar and molasses. The vessel went ashore about three-quarters of a mile west of No. 3 Station during a dense fog and strong south-west wind on 27th July last. Three of the sailors fell into the sea by the breaking of the ship's boat alongside the wreck. They were saved by swimming to the shore, and being hauled in through the surf by members of the staff on the island. Next day the captain and remainder of the crew were taken off by the island life-boat. The captain and crew were sent to Halifax by the despatch boat belonging to the island.

No wrecks occurred at St. Paul's Island during last year.

The iron steamship "Ulunda," 5 years old, 1,161 tons registered tonnage, registered at West Hartlepool, G.B., stranded on Cow Ledge, Bryer Island, N.S., during a dense fog on the 26th August last, while on a voyage from St. John to London, and became a total loss. The vessel was valued at \$125,000, and was classed 100 A1 in English Lloyds. An enquiry was held by Capt. W. H. Smith, R.N.R., into the causes which led to the loss of this fine vessel, and it was the opinion of the court that the accident occurred by a current setting the vessel out of her proper course and to the neglect of the master to use the lead. The Master's certificate was suspended for a period of three months.

A collision occurred on the 20th February last between the steamer "City of Monticello," running between St. John and Digby, and the steamer "Evangeline," registered at Windsor, N.S., running between Digby and Annapolis, N.S. The "Monticello" was coming to the wharf at Digby and the "Evangeline" had just left it on her way out. The "Monticello" struck the "Evangeline" on the port quarter. The "Monticello" is 565 tons register, and the "Evangeline" is 53 tons register. No serious damage was sustained by the "Evangeline," and she proceeded on her trip. An enquiry was held into the cause which led to this collision by Capt. W. H. Smith, R.N.R., who came to the conclusion that the master of the "Monticello" was to blame for the collision. The weather was thick, and snowing at the time, which probably led to the misunderstanding, which might have had a very serious result.

COASTING TRADE OF CANADA.

By the provisions of chapter 83, Consolidated Statutes of Canada, being an Act respecting the coasting trade of Canada, no goods or passengers can be carried by

water from one port in Canada to another except in British ships; but the Governor in Council may, from time to time, declare that the Act shall not apply to the coasting trade of such country. The Parliament of Canada was empowered to pass the Act alluded to under the provisions of the Imperial Act, 32 Vic., Chap. 11, intituled: "An Act for amending the Law relating to the Coasting Trade and Merchant Shipping in British Possessions," which came into operation in this country on its proclamation by the Governor General on the 23rd October, 1869.

It having been ascertained that the following countries, viz., Italy, Germany, the Netherlands, Sweden and Norway, Austro-Hungary, Denmark, Belgium and the Argentine Republic, allowed British ships or vessels to participate in their coasting trade on the same footing as their own national vessels, the ships of Italy, by Order in Council of the 13th August, 1873; those of Germany, by Order in Council of the 14th of May, 1874; those of the Netherlands, by Order in Council of the 9th of September, 1874; those of Sweden and Norway, by Order in Council of the 5th November, 1874; those of Austro-Hungary, by Order in Council of the 1st June, 1876; those of Denmark, by Order in Council of the 25th of January, 1877; those of Belgium, by Order in Council of the 30th September, 1879; and those of the Argentine Republic, by Order in Council of the 18th May, 1881, were admitted to the coasting trade of Canada.

PILOTAGE AUTHORITIES.

The statements of the Decayed Pilot Fund of Montreal and Quebec formed appendices to this report. The annual returns from the different pilotage authorities will appear in the supplement to this report. I have, however, deemed it advisable to insert here an extract from the report of the United States Commissioner of Navigation for 1888, in regard to compulsory pilotage; as this matter has, to a considerable extent, of late, engaged the attention of persons interested in navigation.

"PILOTAGE.

"In the last annual report of this office the matter of compulsory pilotage was discussed at considerable length.

"It was shown that the State laws now governing the matter are not at all uniform, and that in many cases the burden of pilotage falls upon vessels in the coasting trade, and vessels which do not need the service of pilots.

"The Government has been at great expense in improving channels by removing obstructions to navigation, and has established lighthouses, buoys, beacons, fog-bells, whistles, &c., to guide vessels in and out of harbours.

"In many cases masters, especially of coasting vessels, understand a particular harbour as well, perhaps, as the pilots employed, or if not employed, who are paid by the vessel.

"Steam vessels in the coasting trade are not required to take state pilots, and sailing vessels are therefore at a disadvantage in that respect, as well as in others, under existing legislation in regard to these two classes of vessels. Compulsory pilotage is unknown upon the lakes, and so far as the Bureau is aware there is no demand for it there.

"A number of measures have been introduced into Congress with a view to modify the existing laws, so as to bring the whole matter under Federal jurisdiction, as contemplated by the Constitution, but these measures have failed.

"I am not aware of any controlling reason why the existing features of compulsory pilotage should not be prohibited by Congress in the case of vessels of the United States proceeding coastwise, whatever may be the character of their documents. The object might be accomplished in several different ways, as by licensing masters, or by exempting coasting vessels directly, &c. House Bill 3,454, 50th Congress, providing that no sailing vessel of the United States, engaged in the coastwise trade, shall be holden or obliged to take any pilot into or out of any port of the United States, or be compelled to pay any charges or fees to any pilot for pilotage service, tendered under the pilotage law of any State, unless such service be accepted, seems to cover the point.

"House Bill 999, of the same Congress, would accomplish the object in a different manner by licensing the masters, and also by exempting from pilotage any vessel having the aid or towage of a steam vessel in command of a licensed pilot under the laws of the United States.

"In England, pilot's licenses are granted to masters and mates, even though they are aliens, and considerable relief from the compulsory fees of the British pilotage laws is thereby afforded.

"A committee was recently appointed by the Government of Great Britain to enquire into certain grievances complained of by the pilots. These grievances related generally: (1) To loss of income to pilots, and depreciation of pilot service in consequence of granting pilotage licenses to masters and mates. (2) The possibility of national danger through the granting of certificates to aliens. (3) The difficulties in the way of obtaining conviction against unlicensed men acting as pilots. (4) The absence of general compulsory pilotage. (5) Want of appeal from decisions of local pilotage authority.

"The Committee stated that the evidence in regard to the continuance, or the abolition of the principle of compulsory pilotage was of a complicated nature, but that they did not feel justified, looking to the vast interests involved, in recommending that there should be any interference with the system as it now stands.

"The Committee were strongly of the opinion that the time has arrived when the exemption of the owner from liability for damage done by his ship, when the ship is placed in charge of a pilot by compulsion of law, should cease to exist. The opinion was expressed that the master of a vessel, even while the pilot is on board, should continue to be responsible for the conduct and navigation of his ship.

"In some of the States relief has already been afforded by state legislation, while in others, the rules upon the subject are severe and even oppressive.

"It is probable that some action by Congress for the relief of the coasting trade from this burden will be considered requisite and proper in the near future."

OUTSIDE SERVICE.

The number of persons employed on the Outside Service on the 1st December, 1890, was as follows:—

Superintendent of Lights and Light-keepers, &c., in Ontario and above Montreal.....	159
Officers of agency in city of Quebec, and Light-keepers, Fog-whistle Keepers, &c., at and below Montreal, in the Province of Quebec.....	142
Agent, Clerk, Messenger, Superintendent of Lights, Light-keepers, Fog-whistle Keepers, attendants at Humane Establishments, &c., in Nova Scotia	188
Agent, Clerk, Messenger, Superintendent of Lights, Light-keepers, Fog-whistle Keepers, &c., in New Brunswick...	101
Agent and Light-keepers in Prince Edward Island.....	40
Agent and Light-keepers in British Columbia.....	12
Officers and crews of Dominion steamers and vessels	189

The number of persons employed on the Outside Service on the 1st December, 1890, was as follows:—

Inspectors of Steamboats	15
Captains of life-boats.....	27
Examiners of Masters and Mates, and Clerk to Chairman of Board	15
Harbour Police, Quebec.....	20
Officers and servants in Marine Hospitals, including paid physicians attending sick seamen at various ports.....	29
Shipping Masters	25
Harbour Masters.....	203
Officers of Observatories, Meteorological Observers, &c., receiving pay.....	133
Receivers of Wreck.....	47
Wharfingers	93
Making a total of	<u>1,438</u>

For the previous year the number was 1,379. In addition to the 1,438 mentioned above, there are 78 registrars of shipping, who act under the direction and control of this Department, but are, at the same time, Collectors of Customs at the various ports of registration, and receive no salary or fees in their capacity of registrars. There are 95 measurers and surveyors of shipping at certain ports throughout the Dominion, who act as officers of this Department, and are remunerated from their fees of office, although, in addition to such office, many of them hold a position in the Customs service. Also, in addition to the above, by Orders in Council of the 21st April and 2nd December, 1874, the Chief Officer of Customs at each port in the Provinces of Quebec, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island, where no separate shipping office has been established, is to be held and deemed a shipping master, is to receive the fees, make the half-yearly returns to this Department, and act in that capacity under its directions.

From the above statement it will be seen that there are 133 officers of observatories, etc., who receive pay for the performance of their duties; but in addition thereto there are a large number of meteorological observers throughout the Dominion who give their services gratuitously.

I have the honour to be, Sir,

Your most obedient servant,

WM. SMITH,
Deputy Minister of Marine.

DEPARTMENT OF MARINE,
OTTAWA, 1st December, 1890.

N.B.—A report from the Agent of the Department at Halifax in regard to utilizing Messenger Pigeons on the occurrence of wrecks at Sable Island, together with an article contributed by Major-General Cameron to the University "Quarterly Review" on the same subject, forms an appendix to this report.

As the supply of the Parliamentary Paper, containing the statement of the Hon. Peter Mitchell, in regard to deck loads made in 1873, is exhausted, I have deemed it advisable to publish this also as an appendix to the report.

APPENDIX No. 1.

STATEMENT of Expenditure of the Department of Marine, for the Fiscal Year ended 30th June, 1890.

Service.	Amount.	Total.
	\$ cts.	\$ cts.
Ocean and River—		
Maintenance and repairs to Government steamers.....	114,959 20	
Examination of Masters and Mates.....	4,117 83	
Investigations into wrecks and casualties.....	888 94	
Registry of Canadian shipping.....	647 52	
Removal of obstructions in navigable rivers.....	5,737 26	
Rewards for saving life, &c.....	8,150 92	
Tidal observations.....	244 75	
Water Police, Montreal.....	13,167 00	
do Quebec.....	8,620 61	
Winter Mail Service.....	2,752 67	
Gratuities.....	80 00	159,366 70
Lighthouse and Coast—		
Salaries and allowances of light-keepers.....	185,463 41	
Agencies, rents and contingencies.....	18,431 42	
Maintenance and repairs to lighthouses, &c.....	231,273 69	
Completion and construction of lighthouses.....	23,863 09	
Public wharf, British Columbia.....	2,066 59	
Signal service.....	4,976 89	466,075 09
Scientific Institutions—		
Meteorological service.....	52,967 92	
Observatory, Kingston.....	500 00	
do Montreal.....	500 00	
do Toronto.....	4,484 18	58,452 10
Marine Hospitals, &c.—		
Marine Hospital, Quebec.....	10,279 08	
do Kingston.....	500 00	
do St. Catharines.....	311 40	
do and sick and disabled seamen.....	27,727 18	
Shipwrecked and distressed seamen.....	2,911 45	41,729 11
Steamboat inspection.....		20,989 52
Survey, Georgian Bay.....		17,969 23
Civil Government, salaries, including Minister.....	35,121 74	
do contingencies.....	7,714 04	42,835 78
		807,417 53

WM. SMITH,
Deputy Minister of Marine.

F. GOURDEAU,
Accountant.

APPENDIX No. 1a.

STATEMENT of Revenue of Marine Department for the Fiscal Year ended 30th June, 1890.

Service.	Amount.
	\$ cts.
Casual Revenue.....	6,848 72
Capes' Mail Service.....	161 46
Dominion Steamers.....	10,560 36
Examinations Masters and Mates.....	2,186 00
Harbours, Piers and Wharves.....	8,797 79
Harbour Improvement.....	4 00
Harbour Police Dues.....	17,816 95
Quebec Marine Hospital.....	354 90
Steamboat Engineers' Certificates.....	641 65
Steamboat Inspection.....	19,288 68
Sick Mariners' Fund.....	47,881 75
Signal Station Dues.....	965 00
	115,507 26

WM. SMITH.

Deputy Minister of Marine.

F. GOURDEAU,
Accountant.

APPENDIX No. 2.

REPORT ON THE METEOROLOGICAL SERVICE.

The Honourable
The Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith the report of the Meteorological Service for the period from 1st December, 1889, to the 30th September, 1890, being the twentieth report which has been made on this Service.

Since the last report the following stations have been added to our list :—

Ontario.

Class I—

Moose Factory..... A. Nicolson.

Class II—

Schreiber..... Agent C. P. Railway.

Brantford..... Rev. R. Ashton.

Kingsville..... Walter Howlett.*

Biscotasing..... Agent C. P. Railway.

Class II—

Winona..... W. J. McNiven.

Rose Hill, Reservoir, Toronto..... George Reeves.

Quebec.

Lake Abitibi..... Jessie Whiteway.

St. Hyacinthe..... W. P. M. Martin.

Brome..... G. H. Hall (extension of work.)

New Brunswick.

Class I—

Grindstone..... A. Le Bourdais.

Nova Scotia.

Class II—

Nappan..... L. W. Eaton (of Exper'mtl Farm.)

Manitoba.

Class I—

Virden..... Rev. H. L. Watts.

Class II—

Dauphin..... D. McIntosh.

Oak Bank..... R. W. E. Goodridge.

Brandon..... S. A. Bedford (of Exper'mtl Farm.)

*The sunshine recorder, formerly at Windsor High School, has been placed in charge of Mr. Howlett, of Kingsville, it being the nearest station to its former position.

North-West Territories.

Class I—

Little Forks.....William Woods.

Class II—

Peace River.....Rev. J. Gough Brick.

Cotham.....Wm. Trant.

Glen Adelaide.....A. C. H. Shafer.

Wallace.....C. H. Lackey.

British Columbia.

Chief Station—

Esquimalt.....E. B. Reed.

The following stations have ceased to report during the period for the reasons assigned against each :—

Ontario.

Class II—

Bond Head.....	{ H. B. Jeffs, through inability to attend.
----------------	--

Quebec.

Class I—

Bird Rocks.....	{ T. Turbide, telegraph cable removed.
-----------------	---

There have also been some alterations by deaths and resignation of the duty of observing, but it is extremely satisfactory to be able to state that the retiring observers manifested their continued interest in the work by securing responsible persons to undertake the duty.

I regret to have report the following deaths :—

Mr. Leslie Gordon, in charge of the telegraph reporting station at Qu'Appelle, N.W.T.

Mr. Thos. F. Janes, Storm Signal Agent at Port Hope ; Mr. Joseph Eden, Storm Signal Agent at Gaspé, P.Q. ; and Mr. J. Stewart, voluntary observer at Bobcaygeon, Ont. The last named gentleman worked with zeal and care.

The observers in Ontario under Mr. Blue, Deputy Minister of Agriculture, and those in Manitoba under the Department of Agriculture, continue to manifest the same interest in their work as in former years. In connection with this I may remark that it would be to the great advantage of each province and to the Dominion at large if the analagous departments in the other Provinces would endeavour to obtain observers in the parts of their Provinces not already occupied by stations. This remark applies with force to Nova Scotia and New Brunswick, where the observing is confined, in a great measure, to persons in localities selected for a particular object.

The stations at Experimental Farms have not in all cases come up to my expectations. Whilst Ottawa, Nappan and Brandon have done well, the stations at Indian Head and Agassiz have not accomplished much. When the affairs of the latter named places assume a more settled state it is to be hoped they will equal Ottawa, which, under Mr. Ellis, is doing extremely good work.

STORM SIGNAL SERVICE.

There were 723 warnings of approaching storms issued from 1st December, 1889, to 30th September, 1890, 553 or 76.5 per cent. of which were verified.

The winter months following the issue of the last report were characterized by many very severe storms. A storm centre which passed across the Lake region on 11th December, gave a heavy westerly gale in the Maritime Provinces on the

12th; our St. John agent reported 60 miles per hour at intervals all day. Warnings were despatched to Halifax and St. John at 9.40 p.m. of the 11th.

A storm which has been traced from the extreme western part of the continent passed across the Lake region on the 26th, there causing an exceedingly heavy gale; it thence swept eastward, passing across the Maritime Provinces on the 27th, giving an unusually severe gale all along the seaboard, and in the Gulf of St. Lawrence a phenomenally high tide occurred. Ample warning of this storm was given.

Another unusually severe storm swept across the Lake region on the 29th and across the Maritime Provinces next day. A fresh gale prevailed along the seaboard on the 30th for which ample warning was given.

On 8th January an important depression moved across the Lake Region giving a very heavy north-westerly gale; and next day, as it moved across the Gulf, there was a heavy gale throughout the Maritime Provinces, accompanied by intensely cold weather. Warnings were received by our agents from six to twenty-four hours before the beginning of the blow.

A storm centre which moved towards Canada from the Southern States on the 12th caused a particularly heavy gale in the Lake region early on the 13th, and in the Maritime Provinces later in the day. The warning was received at the various signal stations several hours before the beginning of the storm.

Two storm centres, one from the South-west States and the other from the North-west, on the 7th, February united over the Lake region, and next day moved across the Maritime Provinces, giving at many points the most severe gale of the winter. Good warning of this storm was given.

On the 26th March a storm centre developed over Utah and the neighbouring States, moving to Kansas, and thence during the 27th east and north-east to Lake Erie. Throughout the Lake region a violent gale, with a driving snow storm, prevailed on the 28th. On Lake Ontario, of several vessels that had ventured out so unusually early in the season, two were wrecked, and the others more or less damaged. In many parts of Ontario this was the only snow storm of importance during the winter. Storm signals were not displayed at lake stations, as navigation was not considered to be open.

Additional storm signal stations were established at Shippegan and Caraquette, in New Brunswick, and Sault Ste. Marie, in Ontario, and wind stations were established at Low Point and Sambro, in Nova Scotia, and at Sable Island.

TABLE No. 1.

The following table shows the total number of warnings issued and the percentages verified:—

Year.	No. Issued.	No. Verified	Percentage Verified.
1877	743	510	68.6
1878	860	673	78.3
1879	712	591	83.0
1880	889	736	82.8
1881	854	727	85.1
1882	841	658	78.2
1883	1,085	858	79.1
1884	798	663	83.2
1885	830	741	89.3
1886	906	799	88.2
1887	1,093	972	88.9
1888	897	758	84.5
1889 (11 months, 1st January to 30th November).	1,007	822	81.6
1889-90 (10 months, 1st December to 30th September).	723	553	76.5

PROBABILITY SERVICE.

The issue of weather forecasts has been continued uninterruptedly throughout the period comprised in this report, and were published in the newspapers in Ontario, Quebec and the Maritime Provinces. Weather predictions for Manitoba and the North-West Territories will, I hope, be issued before very long. The chief station at Esquimalt, just established, under the charge of Mr. E. B. Reed, will be a great assistance in furthering this work.

The increased demand for forecasts of the weather indicates the reliance placed in them by the public. Special predictions have been requested so frequently of late that space will not permit me to quote them, as has been the practice heretofore; but in all cases possible, special predictions have been furnished to those asking for them.

TABLE

NUMBER of Predictions and Percentage of fulfilment in each District, in each

MONTHS.	LOWER LAKE REGION.						UPPER ST. LAWRENCE.					LOWER ST. LAWRENCE.						
	Number Issued.	Verified.					Number Issued.	Verified.				Number Issued.	Verified.					
		Number Fully.	Number Partly.	Number Not.	Percentage Fully.	Percentage Fully and Partly.		Number Fully.	Number Partly.	Number Not.	Percentage Fully.		Percentage Fully and Partly.	Number Fully.	Number Partly.	Number Not.	Percentage Fully.	Percentage Fully and Partly.
December	108	81	13	14	75.0	87.0	98	77	14	7	78.6	92.9	90	62	20	8	68.9	90.1
January.....	124	80	21	23	64.5	81.5	113	79	22	12	69.9	89.4	109	67	20	22	61.5	79.8
February.....	109	81	10	18	74.3	83.5	107	80	9	18	74.8	83.2	101	83	6	12	82.2	88.1
March.....	114	85	13	16	74.6	86.0	113	81	23	9	71.7	92.0	106	78	17	11	73.6	89.6
April.....	111	77	18	16	69.4	85.6	106	70	18	18	66.0	83.0	108	77	14	17	71.3	84.3
May.....	117	85	21	11	72.6	90.6	107	77	21	9	72.0	91.6	108	71	23	14	65.7	87.0
June.....	113	86	20	7	76.1	93.8	101	77	10	14	76.2	86.1	99	63	13	23	63.6	76.8
July.....	127	102	18	7	80.3	94.5	118	95	16	7	80.5	94.1	121	105	8	8	86.8	93.4
August.....	115	99	13	3	86.1	97.4	107	97	8	2	90.7	98.1	98	80	9	9	81.6	90.8
Séptember.....	119	98	14	7	82.4	94.1	110	102	5	3	92.7	97.3	107	90	9	8	84.1	92.5
	1157	874	161	122	75.5	89.5	1080	835	146	99	77.3	90.8	1047	776	139	132	74.1	87.4

Indications of approaching snow storms have been furnished to the railways, and warnings of these forecasts will this winter be extended over a larger area of country than has been predicted for formerly. Forecasts of rapid thaws have been asked from some localities, and given, and the system of disseminating the probable weather by means of signs displayed on the railway cars has been carried out this year; but I regret to say that whilst the Superintendents and the various executive heads of the different railway companies manifest a great interest in this work, and do all in their power to assist in carrying it out, the train hands, whose duty it is to place and remove the signal discs, do not uniformly evince a disposition to emulate their superior officers, and the signals have been frequently allowed to remain unchanged for lengthened periods, thus not only bringing discredit on this Service, but allowing *false predictions* to be carried throughout the country.

The following table (No. 2) shows the predictions and the percentage of fulfilment in each district in each month, and in the whole period.

II.

Month, and in the Period December, 1889, to September, 1890, inclusive.

GULF.						MARITIME.						TOTAL.					
Number Issued.	Verified.					Number Issued.	Verified.					Number Issued.	Verified.				
	Number Fully.	Number Partly.	Number Not.	Percentage Fully.	Percentage Fully and Partly.		Number Fully.	Number Partly.	Number Not.	Percentage Fully.	Percentage Fully and Partly.		Number Fully.	Number Partly.	Number Not.	Percentage Fully.	Percentage Fully and Partly.
95	75	12	8	78·9	91·6	97	74	16	7	76·3	92·8	448	369	75	44	75·6	91·0
105	69	19	17	65·7	83·8	117	81	17	19	69·2	83·8	568	376	99	93	66·3	83·6
100	74	5	21	74·0	79·0	160	80	9	11	80·0	89·0	517	398	39	80	76·9	84·5
109	71	24	14	65·1	87·2	117	79	12	26	67·5	77·8	559	394	89	76	70·5	86·4
113	73	12	28	64·6	75·2	118	77	19	22	65·3	81·4	556	374	81	101	67·3	81·8
102	68	20	14	66·7	86·3	110	73	25	12	66·4	89·1	544	374	110	60	68·7	88·6
102	66	17	19	64·7	81·4	105	70	20	15	66·7	85·7	520	362	80	78	69·6	85·0
121	105	6	10	86·8	91·7	114	95	11	8	83·3	93·0	601	502	59	40	83·5	93·3
95	68	10	17	71·5	82·1	97	66	15	16	68·0	83·5	512	410	55	47	80·1	90·8
106	82	14	10	77·4	90·6	107	82	18	7	76·6	93·5	549	454	60	35	82·7	93·4
1048	751	139	158	71·7	84·9	1082	772	162	143	71·8	86·8	5414	4013	747	654	74·1	87·9

TELEGRAPH SIGNAL STATIONS.

A telegraph reporting station has been established at Grindstone Island. This was necessary, as the cable was removed from Bird Rocks, which place, until the removal of the cable, had been one of our telegraph stations.

CENTRAL OFFICE.

Mr. Walter H. Taylor has been appointed to the position made vacant by the resignation of Mr. W. E. Davis. It is with much regret that I have to record the death of John Merryfield, who was caretaker and messenger for this Service and the Magnetic Observatory. He was an honest, faithful, reliable and hard-working man, and his death causes the loss of a trusty servant of the Government. These are the only changes here since last report.

TIME SERVICE.

The method of performing this work, together with a table showing discordance at the different observatories, will be found in the report on the Magnetic Observatory.

The report on Quebec observatory forms Appendix "A."

The report on St. John observatory forms Appendix "B."

CHIEF SIGNAL OFFICER.

The Chief Signal Officer of the United States Signal Service, Brigadier General A. W. Greely, and this office, have continued to co-operate for the benefit of both Services and for the good of the general public of both the United States and the Dominion of Canada.

VOLUNTARY OBSERVERS.

The country is greatly indebted to these observers, who give their attention and time gratuitously, and without whose assistance it would not be possible to ascertain, with any degree of accuracy, the climatology of the country. To these local observers is due the interest which the inhabitants of the different sections in which they are situated are taking in meteorology, and the importance of the results of these observations as published monthly in the "Weather Review" is fully recognised. In former years little attention was paid to, or interest manifested in, by the people generally, either meteorological statistics or weather predictions; but now the people are becoming fully alive to the advantages of having a reliable climatological record, especially of temperature, rain and snowfall.

Ontario, Quebec and Manitoba are stirring energetically in establishing unpaid stations, numerous applications coming in for instruments; but I regret to say that I have been compelled to refuse many, owing to the want of funds to purchase the necessary outfits.

Prince Edward Island, British Columbia and the North-West Territories also furnish a number of unremunerated workers; but in New Brunswick there are only two voluntary observers, whilst in Nova Scotia there is not one observer who is not paid for whatever he does.

GREAT NORTH-WESTERN TELEGRAPH CO.

It is partly owing to the promptness and regularity of this company that the efficiency of the weather forecasts and storm warnings has been maintained throughout the season, and I have to ask the officers of the company to accept my thanks for their co-operation in making the working of the Telegraph Service so perfect.

PUBLICATIONS.

Applications are frequently made by persons and institutions in different parts of the world for the publications of this office, and it is to be regretted that the

Annual Report of the Meteorological Service is so much behind, the last issued being that for 1886. The printing of each report has of late years taken over a year; therefore, the reports are becoming more and more behind. Nearly 740 Annual Reports and over 800 copies of the Monthly Weather Review are distributed, as follows:—

Country.	Report.	Review.
Great Britain and Ireland.....	70	35
Norway.....	6	6
Sweden.....	3	2
Denmark.....	2	2
Netherlands.....	3	3
Belgium.....	4	2
France.....	12	10
Germany.....	27	22
Austria.....	13	10
Spain.....	2	2
Portugal.....	3	3
Finland.....	1	1
Russia.....	7	6
Roumania.....	1	1
Turkey.....	1	1
Greece.....	1	1
Switzerland.....	5	3
Italy.....	14	12
Sicily.....	1	1
Algeria.....	1	1
Tripoli.....	1	1
Egypt.....	2	1
India.....	9	7
Ceylon.....	2	1
China.....	2	2
Japan.....	2	2
Philippine Islands.....	1	1
East Indies.....	1	1
Mauritius.....	1	1
Cape of Good Hope.....	1	1
Australia.....	8	7
Tasmania.....	2	2
New Zealand.....	2	1
Newfoundland.....	3	4
St. Pierre et Miquelon.....	1	1
Canada.....	425	616
United States.....	73	44
Mexico.....	5	5
West Indies.....	3	2
Bermuda.....	1	0
Costa Rica.....	2	1
Guatemala.....	1	1
Venezuela.....	1	1
New Granada.....	1	1
Ecuador.....	1	1
Argentine Republic.....	3	2
Uruguay.....	1	1
Chili.....	1	1

LIBRARY.

The number of publications received continues to increase each year, and was 300 for the period comprised in this report being slightly above the number received, in the ten months immediately preceding. These works treat almost entirely upon meteorology, astronomy and terrestrial magnetism. Seven new contributors have been added to the list of those with whom publications are regularly exchanged. The library being now filled to its utmost capacity, a small outlay will shortly be necessary to meet the required accommodation. A large number of volumes of periodicals require to be bound, which will also necessitate a small outlay.

INSPECTION OF STATIONS.

There were 78 stations inspected this year. Of these, 14 were inspected by the Director, 15 by Inspector Payne, 23 by Inspector Stupart, and the remaining number by Inspector Webber.

These reports form Appendices C,D,E,F, and give the state and condition of the various places visited, and show the absolute necessity of regular and systematic inspection.

In Great Britain the self-recording observatories and anemograph stations, as well as the telegraphic reporting stations, are regularly visited each year by the Inspectors of the Meteorological Office, London, and the other stations of less importance are inspected as opportunity offers. I would recommend that a somewhat similar course be pursued in this Service, and that all our chief and important stations be inspected, if not annually, then as often as practicable, and the minor stations as frequently as possible.

All of which is respectfully submitted.

CHARLES CARPMAEL,

Director.

APPENDIX "A."

THE QUEBEC OBSERVATORY,

QUEBEC, 24th October, 1890.

To the Director,

Meteorological Service, Toronto, Ont.

SIR,—In answer to your request, I have to report that the duties in connection with this Observatory have remained as in previous years.

The material in connection with the immediate duties of the observatory is in good condition, with the exception of the apparatus in connection with the "time ball," which, as previously pointed out, will require renewal and possibly modification.

In connection with the subject of time giving, having had occasion to visit many of the lighthouses in the River and Gulf of St. Lawrence during my leave of absence during the past two years, it has occurred to me that this service might be to some extent improved at an inconsiderable cost. The remarks I have to make, although not directly connected with my duties at this observatory, seem to me as possibly opportune, in view of the newspaper discussions which have taken place in reference to the efficiency of their "gun" signals during fogs. It is quite within the limits of the probable that a steamer approaching such a light as, say Belle Isle, might pass from a position of safety to one of immediate danger, owing to not knowing, even approximately, at what time to expect the next "gun" signal. Ordinary noises on ship-board in such a case would be sufficient to prevent its being heard. As the system is at present, the keeper fires his gun on the approach of a fog, and continues the firing at stated intervals afterwards. My suggestion is that he fire his gun immediately on the approach of a fog, and that he continue firing at every hour, or half hour, as the case might be, of Greenwich time—that is, of standard time. To those points connected by telegraph there should never be an error of determining these instants greater than a minute, and in consequence every shipmaster should know within that interval of uncertainty when to take the utmost precautions for hearing the signal. These electrically-connected stations might have their standard time given them from the nearest observatory, once a week or more often, if the present means of distributing time to them through the central telegraph offices was considered insufficient. As for those stations not connected by telegraph, I would have their time given to them by outward-bound steamships of the regular

lines, making it a request to their agents here that their captains be instructed to hoist a signal or fire a signal-gun at that Greenwich half hour exactly which occurs whilst they were passing within hearing or seeing distance of the station. If the suggestion is of any value the steamship companies would willingly put themselves to the necessary inconvenience to carry it out.

And finally, if the suggestion is of any value, it represents a system that would be equally applicable to all nations whose vessels use Greenwich time.

I have the honour to be Sir,

Your obedient servant,

W. A. ASHE,

Director.

APPENDIX "B."

THE OBSERVATORY,

ST. JOHN, N.B., 30th September, 1890.

Meteorological Office, Toronto.

SIR,—I have the honour to submit the following report of this observatory for the period ending 30th September, 1890. Meteorological observations have been made and recorded at same intervals as in the past. The observations with the transit instrument for the correction of clock rates and errors has been performed as in my former reports. The daily time signal given to the shipping and others by dropping the time ball at 1 p.m., local time, has been given without interruption.

Storm warning signals, when ordered up from Toronto, have as usual been promptly displayed from the staff at signal station on Customs building. The lamps used for the night signals blow out with a strong breeze, and as in my last report I would recommend that the incandescent electric light lamps be used for this purpose.

No change has yet been made in the time in this city; therefore, three different times are used, viz., railway time, W. U. Telegraph time and local time.

The observatory is frequently visited by ship captains, for the purpose of comparing their barometers, &c., with the instruments in this office.

I have the honour to be, Sir,

Your obedient servant,

GEO. HUTCHINSON,

Observer.

APPENDIX "C".

STATIONS INSPECTED BY DIRECTOR.

North Bay, Ont.—The index of the minimum thermometer was in the bulb, and there is grave reason to suspect that the instrument had not been properly set for a long time, so that the readings have been altogether erroneous.

Maple Creek, N.W.T.—The thermometer exposure is defective. In the afternoon the sun shining on a wooden wall just to the east of the thermometer screen would affect the readings.

Spence's Bridge, B.C., I inspected, for the first time, although it is nearly eighteen years since the station was started. The observations have been carefully taken, but the glass of the barometer cistern was so opaque owing to deposit from the mercury that I was unable to obtain an accurate comparison until after cleaning. There was some air in the tube of this instrument, so that the readings in the past are unreliable. This instrument, as well as a spare one, which had a large amount of air in the tube I set in thorough working order. The thermometer screen was attached to the north end of a store. The dry bulb thermometer, after applying the correction supplied with it, reads too high by $0^{\circ}.4$ and the wet bulb too high by $0^{\circ}.6$. Both these

thermometers were by Casella, and were furnished to the station in 1872. It is probable that the shrinking of the bulbs, which has caused the rise in the readings, nearly all took place in the first year or two that the thermometers were at the station, so that nearly the whole of the observations from this station require correction. The minimum thermometer in use was found to be correct, and the maximum after its tabular correction was applied, read $0^{\circ}.1$ too high.

Victoria, B. C.—A new station has been established just outside of Victoria, not far from the entrance to Esquimalt Harbour, under Mr. E. B. Reed. The exposure selected for the instruments is satisfactory; the anemometer is placed on a pole about 25 feet high on the top of a rocky eminence overlooking the harbour, and is connected by wires with an electrical recorder at the observer's house. The station was in good working order before I left.

Fort Simpson, B. C.—The observations at this point are under the superintendence of Mr. Hall, the Hudson Bay Factor, and are mostly taken by his sister, who appears to be a careful observer. The glass of the barometer cistern was so opaque from deposit on the inner surface that it was impossible to see the ivory point, which had never been properly set since the instrument was at the station. The minimum thermometer which was furnished from this office had been broken, and Mr. Hall had replaced it by a minimum thermometer by Hicks, which I found to read $1^{\circ}.0$ too low. I thoroughly instructed Miss Hall in the points as to the observations in which I found she needed instruction, and cleaned and compared the barometer.

Port Moody, B. C.—The observations at this point seem to be carefully attended to. The mercury in the barometer was in need of cleaning, which was done.

Aggasiz, B. C.—The maximum thermometer was out of order, and will have to be replaced by a new one. The minimum thermometer had some of the spirit detached from the main column, causing the instrument to read $1^{\circ}.5$ too low. The column was reunited.

Banff, N. W. T.—The observations here seem to be carefully taken. The minimum thermometer I found needed a correction of $+1^{\circ}.9$. I went with the observer and the Superintendent of the National Park to the top of Tunnel Mountain to see if it would be a suitable point for placing an anemometer, and am of opinion that one might advantageously be placed there.

Calgary, N. W. T.—The barometer thermometers and rain gauge at this station I found at the premises of the assistant. In reading the barometer the ivory point was never set. The assistant had never been properly instructed, and practically no supervision had been exercised by the nominal observer; the observations had been taken half an hour before the proper time. I cleaned the barometer and thoroughly instructed the assistant in the duties of the office.

Medicine Hat, N. W. T.—The observations at this station have not been so well taken as they should be. The barometer was found to need a correction of $+0.022$, and the observer had also been in the habit of reading too low, through imperfect setting. The minimum thermometer needed a correction of $+0^{\circ}.4$ instead of $-0^{\circ}.3$ which had been previously used, the maximum of $-0^{\circ}.1$ instead of $-0^{\circ}.3$. The wet bulb thermometer of $-0^{\circ}.7$, instead of $-0^{\circ}.2$, and the dry bulb of $-0^{\circ}.5$ instead of $-0^{\circ}.3$.

Swift Current, N. W. T.—The barometer needed cleaning, but otherwise the station was not in need of inspection.

Prince Albert, N. W. T.—The assistant observer was in need of instruction, which was given. The maximum thermometer required an addition of $-0^{\circ}.6$ to the tabular correction, and the minimum of $+1^{\circ}.5$. The barometer was broken, and a new one was left to take its place. The difference of level between the cistern of the barometer and the roadbed of the railway at a known point was determined, and the resulting height above sea level was 1,402 feet.

Qu'Appelle, N. W. T.—The barometer was in need of cleaning, which was done. The other instruments were in good order, and the observations seemed to be carefully attended to. The observer was about to move to new premises, and a site was selected for the thermometer screen and also for the anemometer.

Winnipeg, Man.—The instruments in use at this station are all in good order, and are in charge of a careful observer. They were just being removed to the new college. A suitable exposure was selected for the thermometers and for the anemometer.

APPENDIX "D."

CHARLES CARPMAEL, Esq. M.A., F.R.A.S.,
Director Meteorological Service of Canada.

SIR,—I have the honour to report that I have inspected the following stations during the year:—

Point du Chêne, N.B., 17th July, 1890.—Storm signal mast in good order; required a new drum signal.

Charlottetown, P.E.I., 18th July, 1890.—Telegraph reporting station in good order and returns well kept; some slight repairs needed to anemometer wind vane. I do not consider the exposure of the thermometers perfect, but the best under the circumstances.

Souris, P.E.I., 19th July, 1890.—Storm signal station mast and signal in first rate condition; storm reports behind hand, but agent required general instruction.

Georgetown, P.E.I., 21st, July 1890.—Temperature and rain station (volunteer). Mr. McDonald is willing and attends to his reports. Minimum thermometer No. 576 not in good order; other instruments working well.

Grindstone, Magdalen Islands, 23rd July, 1890.—I started a fully equipped telegraph reporting station, instructed the agent in his work, erected instruments and arranged for telegraph service.

The exposure for wind instruments, although fair, is not of the best, owing to the hilly nature of the island; otherwise, I consider valuable results are likely to be obtained from this station.

Glance Bay, C.B., 23rd August, 1890.—Storm signal, temperature, &c. The signal mast was in a dilapidated condition and rotten at the butt. I ordered 6 feet cut off, and mast to be re-stepped and stayed. This will make it a good mast still, and quite high enough. Thermometer sheds worn out from age and require renewing. Minimum thermometer "C" 331 broken.

Cow Bay, C.B., 3rd August, 1890.—Storm signal station. The new mast is a first-rate job and well exposed; signals, &c., in good order. Temporary delay in reports was owing to agent's absence.

Low Point, C.B., 4th August, 1890.—Started a fully equipped wind station. Anemometer and wind vane well exposed, 10 feet above roof of dwelling house; electrical connections run into dwelling house. Instructed agent in the use of instruments, &c., and consider he will make a painstaking observer. The exposure is good at this point and should give valuable records.

Sydney, C.B., 7th August, 1890.—Telegraph reporting station. The instruments at this station were all in good order and well attended to. The reports were well kept. I consider this a very reliable station.

North Sydney, C.B., 8th August, 1880.—Storm signal station. The signal mast is in good condition and very well exposed. A new signal-box was necessary, which was ordered to be constructed. It was necessary to point out the delay in reports from this station.

Sambro Island, N.S., 12th August, 1890.—I started a new wind station here; erected anemometer wind and vane on mast stayed to solid rock; placed anemograph in fog-whistle house and instructed light-house keeper in working of instruments, electrical connections, &c.

This station should give good results, but I fear reports will not be received regularly, as owing to the exposed position of the island it is at times impossible to reach the main land for weeks.

Halifax, N.S., 16th August, 1890.—Telegraph reporting station. The work at this station was done in a satisfactory manner and returns well attended to. The anemograph records were not good owing to the want of a general overhauling of the instruments. This was attended to, new connection made, &c., and anemograph is now in good order. Minimum thermometer No. M. 0-53 reading too low and required putting in order.

Liverpool, N.S., 19th August, 1890.—Storm signal station. New mast is a splendid spar, and well set up. Signals, &c., all in very good order.

Digby, N.S., 21st August, 1890.—Storm signal and rain station. The mast is rotting badly at butt, and check timbers are also rotten. It will last this season, but I would recommend it being thoroughly overhauled in the spring. If mast was placed on end of pier, instead of present position, it would be of much more service, as it could then be seen through the Digby Gut by vessels passing outside. I was told vessel men complain of the present position. I did not find the observations at this station satisfactory, the observer being careless. This is the second time I have complained of this station.

Yarmouth, N.S., 22nd August, 1890.—Telegraph reporting station. The anemometer and wind vane were worn out and were condemned; new instruments will be required. All other instruments were in good order. The work is well done here and the storm signals and mast in first rate order.

St. John, N.B., 25th August, 1890.—The barometer was very dirty, and required cleaning; thermometers and rain gauge in good order, but I do not consider the exposure good. It is, however, the best on the premises. Wind vane required some repairs. I found the reports from this station very much behind hand; the records were kept up to date by Miss Hutchinson, but the returns were not made by Mr. Hutchinson. He promised to send the back reports at once and be more prompt in future.

Fredericton, N.B., 27th August, 1890.—First-class station. Compared travelling standard with the standard barometer here and found them to agree perfectly. All instruments were in first-class order and records well kept. I consider this a very reliable station.

Trenton, Ont., 15th May, 1890.—Storm signal station. I found, as reported to you, that this station had been left in a disgraceful state by the agent, who was away. I recommended that Mr. C. M. Richardson, of the Messrs. Gilmore & Co., be appointed, as the most fitting person there to attend to the service; and that Mr. Clark, who had neglected his duty to such an extent as to allow the signals to remain hoisted for a week or longer at a time, and who had also allowed the signal halliards, cone and shed to be destroyed, be dismissed.

Before concluding this report, I would recommend that the storm signal station be re-established at Louisburg, C.B., as there is now telephonic communication from Sydney. I would also recommend that a storm signal be placed at Lunenburg, N.S., as since the opening of the railway there shipping and fishing have increased considerably. I also beg to suggest to you that the approaching direction and velocity of the wind be given by a simple code of flag signals to the shipping and fishermen, by utilizing the signal stations already established by the signal service in the Maritime Provinces. By suggestions from those interested in the coast trade made to me when in the Maritime Provinces and enquiries subsequently instituted, I am of opinion that at very small cost an immense amount of valuable information may be thus given. The direction and velocity of the wind has a very large influence in many localities, locally known, and a fore-knowledge of them would be of great service, especially to the fishermen. I have seen the value of the signal service demonstrated, and these stations command the view of large interests, to which the present probability service is of little use, because unattainable.

I have the honour to be, Sir,

Your obedient servant,

HUGH V. PAYNE,

Inspector.

APPENDIX "E."

METEOROLOGICAL OFFICE,
TORONTO, December, 1890.

CHARLES CARPMAEL, Esq., M.A., F.R.A.S.,
Director Meteorological Service of Canada,
Toronto.

SIR,—I have the honour to submit herewith report of the stations, in Canada, inspected by me during the period comprised in this report:—

Port Dalhousie, Ont., inspected 13th June, 1890.—Mast and signals at this station in good order. The agent not in town and boy left in charge, who gave me to understand that night signals were not always hoisted when ordered.

Port Colborne, Ont., inspected 13th June, 1890.—The mast and signals in good order. Until this season, Mr. Hughes, the agent, has stored signals in a Grand Trunk Railway freight shed, which is now not in use and is minus any windows. Orders were given to have a shed built at the foot of the mast which is to be neatly painted and put in order. The agent complained that signal lamps did not burn satisfactorily; new lamps have been sent him.

Port Dover, Ont., inspected 13th June, 1890.—Storm signal mast and signals in good order; rain gauge removed from a position sheltered by trees to a good site.

Brantford, Ont., inspected 14th June, 1890.—The instruments at this station are fairly well situated but perhaps rather too closely surrounded by cedar trees. The observations are taken by a son of Mr. Ashton, and are, apparently, thoroughly trustworthy.

Paris, Ont., inspected 14th June, 1890.—Instruments well exposed and in good order.

Woodstock, Ont., 14th June, 1890.—Instruments all in good order and well exposed. The anemometer, which was rather too close to the top of the dome of Woodstock College, has been raised about a foot. During the evening I made a thorough test of all the thermometers at this station.

Port Stanley, Ont., inspected 16th June.—The anemometer is badly exposed, being sheltered by trees in several directions. Instruments generally in good order.

St. Thomas, Ont., 16th June, 1890.—Rain gauge in good position, and record seems to be well and accurately kept. Little reliance can, however, be placed on temperature observations.

Ridgetown, Ont., inspected 17th June, 1890.—Did not see the observer at this station he being away. The thermometers are in a good position and well taken care of.

Cottam, Ont., inspected 17th June, 1890.—Made a change in the position of the rain gauge, removing it from a shifting position in the garden to the top of a 4 foot post, where it is firmly secured.

Amherstburg, inspected 18th June, 1890.—Left orders with Mr. W. H. McEvoy to have mast painted. New lamps and cone are required; drum will last another season. Mr. McEvoy says that the signals are much appreciated by vessel men.

Kingsville, inspected 18th June, 1890.—The rain gauge and thermometers are in a good position, and the records well and accurately kept. Mr. Alexander, the observer, reported himself willing to take charge of a sunshine recorder.

Mr. Walker, the owner of the "Mettawas Hotel," would like Kingsville to be a first-class station; and if this should not be feasible, he would like to have an anemometer on the top of the hotel and a storm signal mast on the pier. There are several fishing boats at this place, and there are occasionally vessels in harbour. It would certainly be well for this to be a storm signal station, but there are many harbours on the lakes with a prior claim. It is to be remembered that there is a first-class station at Detroit, which is thirty miles distant, and that we have an anemometer with well high perfect exposure only sixteen miles away.

Sarnia, Ont., inspected 20th June, 1890.—The signals at this station are in good order. The agent grumbles much at the small remuneration received by him, and also at the difficulty experienced in hoisting our heavy signals, and strongly recommends that flags be substituted. He says that the Americans at Port Huron laugh at our clumsy arrangements.

Birnam, Ont., inspected 20th June, 1890.—Drove to this station from Forest, but did not see observer, who was absent at a farm some four miles distant. The instruments are well placed, and observer apparently takes much interest in his work.

St. Mary's, Ont., inspected June 21st, 1890.—Mr. Thomson is an enthusiastic observer, taking much pains with his work. The instruments are particularly well placed, and are kept in good order.

Goderich, Ont., inspected 21st June, 1890.—The mast at this station looks rather shaky. The agent, however, guarantees that should it be blown down that he will have another in its place within twenty-four hours. The signal lamps are in good order.

Bayfield, Ont., inspected 22nd June, 1890.—Things were not in a satisfactory condition at this station; the signals were at the agent's house, fully a quarter of a mile from the mast; the balliards were not rove, and what was once intended to be a signal storehouse at the foot of the mast, was now only a rotten fence round the mast. I left with the agent plans, &c., for a new storehouse, and strict instructions that the balliards were always to be kept rove and signals kept ready for immediate service.

Kincardine, Ont., inspected, 23rd June, 1890.—The mast and everything in connection with the storm signals in good order. Dr. Martin, the observer, was away from town, and the observations were being taken by an assistant, who obviously did not understand the work. The thermometers and rain gauge are fairly well placed and in good order.

Listowell, inspected, 24th June, 1890.—I visited this station in order to withdraw the instruments supposed to be in possession of Mr. Alexander Kay, who used to take observations. At the Post Office I was informed that Mr. Kay was dead, and was directed where to find his widow. She informed me that she knew nothing of the instruments and that to the best of her knowledge Mr. Kay had never taken observations.

Durham, Ont., inspected, 24th June, 1890.—Found both thermometer shed and rain gauge in bad positions at this station, the former being on the floor of a south veranda, and the latter much sheltered by house and trees. Dr. Gun promised that he would have the former removed and placed on a north wall selected by me.

Egremont, inspected 25th June, 1890.—Everything in good order and records well kept. I judge the observer to be one of the best in the Service.

Saugeen, Ont., inspected 22nd and 24th January, 1890.—I visited this station in order to put up and adjust an electrical anemometer in place of the old instrument, which was blown away in a gale at the beginning of the month. The new instrument was placed on the old stand and everything left in good order.

Point Clark, Ont., inspected 23rd June, 1890.—The observations are taken at the lighthouse; the instruments are well exposed and the work well attended to.

I have the honour to be, Sir,

Your obedient servant,

R. F. STUPART,

Inspector.

APPENDIX "F."

METEOROLOGICAL OFFICE,

TORONTO, December, 1890.

CHARLES CARPMAEL, Esq.,

Director Meteorological Service of Canada,
Toronto.

SIR,—I have the honour to submit the report of the stations visited by me since November last, as follows,—

In the first place I beg to state that before inspecting the C.P.Ry. stations along

the north shore I called on Mr. C. W. Spencer, the Manager of the Eastern Division of the C.P.Ry., informed him of the careless way the duties had been performed in the past at many of his stations, and wished to know if he desired the agents to attend to the work. His reply was: "Yes; decidedly"—that I was to tell the agents he insisted on the observations being faithfully taken, and that he wished us to report to him at once if his orders were not attended to. Mr. Spencer further added that the snow warnings forwarded to him by our Service had been of much benefit to the C.P.R.

False Ducks, Lake Ontario, 14th May, 1890.—This would be a very good place for a wind-recording station providing anemometer was placed on top of lighthouse and anemograph placed in dwelling house adjoining; total height of anemometer from ground would be about 90 feet; dwelling 22 yards distant.

Pictou, Ont., 14th May, 1890.—The storm signal mast here will require repairing in the spring.

L'Original, Ont., 16th May, 1890.—Instruments had been destroyed here; observer gone elsewhere; could find no one willing to take the observations gratuitously.

Alexandria, Ont., 17th May, 1890.—The instruments were well exposed here, and all in good order, except the barometer, which was dirty, and had a large amount of air in it, making it read —282. The barometer, it seems, was sent by express to this station, and arrived as I found it. It is now quite correct. Mr. Smith is a very conscientious observer, and his reports are most trustworthy.

Ottawa, Ont., 19th May, 1890.—Height of this station 314 feet above mean sea level. Instruments all well exposed, except that it was found necessary to procure a further protection for thermometers, owing to drifting sand in high winds. Observer now thoroughly understands reductions and corrections to observations.

Fitzroy Harbour, 20th May, 1890.—Instruments formerly supplied to Mr. Tait all destroyed. Mr. Baird quite willing to take observations, so I instructed him and furnished maximum and minimum thermometers.

Renfrew, Ont., 21st May, 1890.—Mr. Wright, jun., has superseded Mr. Smallpiece as observer here. The instruments are particularly well exposed, and the observations carefully taken.

Clontarf, Ont., 22nd May, 1890.—Mr. Schultz's house is in a small valley, the surrounding hills being thickly wooded. The instruments are well exposed and the work attended to with great care. A detached piece of spirit (2°) was found in the minimum; this error had probably existed for at least a year. Observer in future will be able to rectify a similar error.

Rockcliffe, Ont., 26th May, 1890.—The barometer was excessively dirty; substituted fresh mercury in cleaning it. It was necessary to furnish a new thermometer shed, the old one being quite worn out. There is no exposure for anemometer anywhere in the immediate neighbourhood. Mr. McIntyre has promised to exercise greater care over the observations.

Mattawa, Ont., C.P.R., 26th May, 1890.—Moved thermometer shed and rain gauge from front of station to agent's garden, a much more suitable place and away from meddlers. The rain gauge required soldering.

North Bay, Ont., C.P.R., 27th May, 1890.—No rain gauge here, and thermometers black with dirt; evidently not been touched for a long time. The agent away for a week, so could do nothing but leave Mr. Spencer's instructions in the matter.

Sudbury, Ont., C.P.R., 29th May, 1890.—Mr. Frood, the former observer, now lives at Whitefish, and supposed to have the thermometers formerly furnished with him. Instructed agent C.P.R. in duties required, and anticipate satisfactory observations.

Cartier, Ont., C.P.R., 29th May, 1890.—Instruments in good order, and observations still carefully attended to.

Biscotasing, Ont., C.P.R., 30th May, 1890.—No attempt had been made to utilize instruments at this station. Placed them in position and gave Mr. Spencer's orders.

Chapleau, Ont., 31st May, 1890.—No rain gauge here. Agent C. P. R. not very willing to attend to duties.

Missanabie, Ont., 31st May, 1890.—Agent C. P. R. fairly good observer, instructed him in proper reading of rain gauge.

White River, Ont., 1st June, 1890.—The barometer was in a dangerous place, without a case. It is possible that some of the past errors in the readings may be owing to the poor light where it was suspended; again, there was a little air in the barometer, and it was leaking slightly; the latter I found impossible to rectify, so a new one will have to be furnished. All the other instruments were in very good order. Mr. McLaughlin is not a good observer, but his assistant who attends to the duties is careful, and as a rule, reliable. Mr. McLaughlin promised that he would study the work at once and make himself thoroughly conversant with the duties required of him.

Heron Bay, Ont., 3rd June, 1890.—The thermometer shed was almost touching the ground. Had it placed at regulation height, and supplied a rain gauge, at the same time giving necessary instructions. The agent of the C. P. R. here was not very willing to attend to the duties.

Schreiber, Ont., 4th June, 1890.—Agent of the C. P. R. here absent on leave, but local superintendent promised that he would see that the observations were attended to on his return. Instruments all in good shape.

Nepigon, Ont., 5th June, 1890.—Agent C. P. R. changed at this station a few days before my arrival. Instructed the new observer, and supplied new receivers for rain gauge.

Port Arthur, Ont., 6th June, 1890.—The thermometer shed was quite worn out; a new fence was also required, together with turnbuckles for strengthening storm signal mast. The exposure for anemometer is very poor. Mr. Cooke is anxious to have it changed to higher ground at the north of the town, but do not consider the position good enough to warrant the expenditure. The duties here are faithfully attended to, and I was informed that the storm signals were much esteemed.

Ignace, Ont., C. P. R., 7th June, 1890.—A new thermometer was needed here, the one formerly in use having become destroyed. Instructed the agent and he promised to attend to the observations.

Savanne, Ont., C. P. R., June, 1890.—The agent here, who furnished such good reports for several years, has been changed back to his old station, after an absence of eighteen months, so Savanne will again be one of the best railway reporting stations. I supplied a minimum thermometer, a maximum being already in use. It was found necessary to remove rain gauge the recent erection of a shed having materially interfered with its exposure.

Buda, Ont., 9th June, 1890.—New agent just arrived here; instructed him in work and he has promised to attend to the duties.

Sault Ste. Marie, Ont., June 12th, 1890.—Contracted with Mr. Lefebvre to erect first class signal mast complete and drum-house for the sum of one hundred and twenty dollars (\$120.00). Major Elliott who has been a volunteer observer for several years past, has been appointed agent here. I instructed him in the duties required, and feel assured that the work will be well done. It would be advisable to have some means of notifying shipping when the storm is expected, only, on Lake Superior. A white cone would answer the purpose. The instruments are in good order and exposure.

Little Current, Ont., 16th June, 1890.—It was found necessary to change the positions of all the instruments here as former exposures were not good. A suitable shed was also required for the thermometers, together with a new anemometer and rain gauge. Mr. Potts apparently takes much interest in the observations, but was evidently not quite conversant with the requirements for a good exposure for instruments.

Port Hope, 26th June, 1890.—I found that the repairs to the signal mast ordered by me the preceding summer, had been carefully carried out, and everything is now

in first-class condition. Mr. Harcourt who succeeds Capt. Janes, deceased, will undoubtedly attend to the duties with great care, and this will continue to be one of our reliable signal stations.

London, Ont., 19th August, 1890—Re-started this station, Mr. J. S. Dewar having been appointed to fill the position of observer. The instruments are placed at Mr. Dewar's residence, in what was formerly Westminster, now taken into the city limits. The exposure for thermometers and rain gauge is good, but no suitable place for anemometer is to be found, either at the residence or at Mr. Dewar's office in the city. Mr. Dewar had never had the least experience with the work before; consequently, the many difficulties in setting and reading instruments, reducing observations, &c., were hard for him to overcome. I trust, however, with practice that he will soon become a reliable observer.

Before closing my report I would recommend that the snow warnings issued to the C. P. R. be further extended this winter from North Bay to Port Arthur, the districts being designated as Nos. 12 and 13th.

I have the honour to be, Sir,

Your obedient servant,

B. C. WEBBER,

Inspector.

REPORT OF THE MAGNETIC OBSERVATORY.

MAGNETIC OBSERVATORY,

TORONTO, November, 1890.

The Honourable

The Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit herewith report from the 1st of December, 1889, to the 30th September, 1890.

During the year the regular routine magnetical and meteorological observations have been carried on as formerly, and the self-recording magnetographs have been kept in operation, as likewise have the barograph and thermograph. The changes in the School of Practical Science have necessitated the removal of the anemograph from that building, and as the proximity of that building interferes with the wind exposure at the observatory, we now have to rely solely on the wind observations at the Toronto Island.

The changes at the School of Practical Science not being yet completed, the observations mentioned as necessary in my last report to determine the amount of influence on the magnetic instruments of the large amount of iron in that building have not yet been undertaken.

I regret to have to record the death, in July last, of John Merryfield, who had been the observatory messenger for nearly fourteen years, and who faithfully performed his duties to within a few days of his death.

The time exchanges with Montreal, Quebec and St. John have all been registered on the chronograph at Toronto, the comparisons taking place as usual, during the evening, with the exception of two or three, which were tried as an experiment in the afternoon and found to work well.

The errors of the Toronto clock, and of the timepieces used by the observers elsewhere, are computed from the latest observations.

The examination of the monthly clock and chronometer comparisons and transit observations, sent in from the observatories at Quebec and St. John, has been performed.

The time at this observatory was obtained from the observations of 392 stars and 17 solar observations. These latter have been taken to check the error of the clock when the nights have been too cloudy for stellar work. The position of the stars used

in the reductions are from the Berliner Jahrbuch. The collimation error of the transit instrument has been determined frequently from micrometrical measurements on the collimating telescope and reversals on polaris and other stars.

TIME SERVICE.

The time exchanges between the various observatories and Toronto have been carried on as usual.

The following table shows the difference between the time by "Standard Observer" and that given at the various exchanges.

The sign + indicates that the time as sent from the various observatories is faster than that by the "Standard Observer."

—	Toronto.	Montreal.	Quebec.	St. John.
1889.	Secs.	Secs.	Secs.	Secs.
December 2nd.....	+0·03	—0·03	+0·38	—0·91
do 17th.....	+0·27	—0·27	—1·77	—1·34
do 30th.....	+0·14	—0·14	+0·11	—2·08
1890.				
January 23rd.....	+0·16	—0·16	+0·08	.....
February 11th.....	.....	.....	+0·15	—2·23
do 26th.....	+0·00	+0·00	—0·55	—2·22
March 18th.....	—0·13	+0·13	+0·62	+1·07
April 11th.....	+0·30	—0·30	+0·49	—0·98
do 24th.....	+0·39	—0·39	.....	+0·66
May 21st.....	.....	.....	—0·32	+8·14
June 19th.....	.....	.....	—0·81	—0·53
July 11th.....	+0·29	—0·29	—0·11	+0·12
do 29th.....	+0·30	—0·30	—1·25	+1·92
August 14th.....	+0·17	—0·17	+0·87	.....
September 19th.....	+0·33	—0·33	—0·61	.....

The time by standard observer is obtained by taking the arithmetical mean of the times as determined at Toronto and Montreal, after applying the personal equations between the observers and the Director of the Magnetic Observatory, whose absolute equation is known to be almost insensible.

NOTE.—Where no exchange has been made with Montreal the Toronto time corrected for its observers' personal equation is adopted as standard time for the comparisons with Quebec and St. John.

The exchanges between Toronto and Montreal would seem to indicate some change in the personal equations of the observers.

All of which is respectfully submitted.

CHARLES CARPMAEL,
Director.

REPORT OF KINGSTON OBSERVATORY FOR 1890.

OBSERVATORY, KINGSTON, 18th November, 1890.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I beg leave to submit, for the information of the Minister of Marine and Fisheries, the Report of the Kingston Observatory for 1890.

Various small repairs connected with the opening of the shutters, &c., have been found necessary since last report. An improved compensation pendulum has been fitted to the mean-time clock. The sidereal clock by Fauth still continues to give the greatest satisfaction. Arrangements are nearly completed for heating the observer's small room by hot water, instead of a coal stove, and thus at once keeping up a more equable temperature and economizing space.

The usual observations from day to day, and others of special interest, have been made throughout the year.

I have the honour to be, Sir,

Your obedient servant,

JAS. WILLIAMSON,

Director Kingston Observatory.

REPORT ON THE MCGILL COLLEGE OBSERVATORY, MONTREAL, FOR
THE ELEVEN MONTHS ENDING 30TH NOVEMBER, 1890.

OBSERVATORY, MONTREAL, 1st December, 1890.

WM. SMITH, Esq.,
Deputy Minister of Marine.
Ottawa.

SIR,—I have the honour to present the report on this observatory for the present year, to date.

Meteorological Observations.

The regular meteorological observations, as particularized in my report for the year 1888, have been carried forward without inter-ruption. The daily and monthly results have been published in the *Montreal Gazette* and the monthly summaries in the *Canadian Record of Science*.

Time Service.

Determinations of clock errors have been made by the observation of 532 stars on 92 nights. The noon time ball has been regularly dropped, for the use of the shipping of the port, on all week days during the season of navigation. Time signals have also, as in former years, been distributed continuously to the various corporations and public institutions enumerated in my report for 1888. Noon time signals have also been transmitted over the lines of the Great North Western Telegraph Company to Ottawa for the Government time service. I regret to say, in this connection, that I have not been permitted to complete the work of reorganizing the time service at the Parliament Buildings, and that the reputation of our service is made to suffer through the insufficiency of the means adopted by the Government at Ottawa to insure the accuracy of the firing of the noon time gun.

Exchanges of clock signals with the Toronto Observatory have been made on twelve days. The average difference between the mean-time clocks of the two observatories on these days was 0s.24., and the greatest difference on any one day was 0s.62. The comparisons give a "probable error" for the time of one observatory as compared with that of the other, at any instant, of 0s.21.

Longitudes.

In the summer of 1883 the longitude of this observatory was determined by reference to the position of Harvard College Observatory, in a series of observations extending over four weeks, and conducted with the greatest possible accuracy. Subsequently, the longitudes of Toronto and Cobourg were determined by difference from Montreal. During the past year some doubt has arisen as to the accuracy of the trans-Atlantic longitude determinations upon which the geographical positions of American stations are made to depend, and it has been suggested that

there should be an independent determination for Canada made by direct connection with Greenwich. The matter has been brought under the notice of the British Government, at the request of the Royal Society of Canada, through His Excellency the Governor General. Sir Charles Tupper has also placed the matter before the Astronomer Royal, who is giving the movement his hearty support, and has made the following reference to it in his report to the Board of Visitors of the Royal Observatory at the Annual Visitation in June last. * * * "Several proposals have been made to me recently for the telegraphic determination of the difference of longitude between Greenwich and stations which are important in connection with geodetic surveys. The Superintendent of the McGill College Observatory, Montreal, has asked for the co-operation of Greenwich in a direct determination of longitude, with a view to making that observatory the base station for the geodetic survey of Canada, the Canadian Pacific Telegraph Company having offered the use of their lines and connecting cable for the purpose. A re-determination of the longitude of Washington is proposed by the Superintendent of the United States Coast Survey, and in connection with this it may be advisable to fix the longitude of the terminus of the trans-Atlantic cables. Lastly, M. Otto Struve has urged the importance of re-determining with improved modern appliances the longitude of Valentia, as the extremity of the great European area of longitude. It seems desirable that the Royal Observatory should take part in these operations, and the experience gained in the observations for the longitude of Paris and Dunkerque would greatly facilitate the work. Some additions to our instrumental appliances would be necessary for these and other longitude determinations which it might be expedient for us to undertake in the future."

During the past summer I took occasion to visit the terminus of the Commercial Company's cables at Canso, with a view to advancing arrangements for the work. The Canadian Pacific Telegraph Company, through Mr. Hosmer, General Manager, having offered us every facility towards the prosecution of the determination, it is confidently hoped that this work—a most important one, from a commercial and scientific, as well as from a patriotic and national standpoint—may be carried out in the early part of next summer

Sunspots

The observations of sunspots, by the methods explained in former reports, have been made whenever the condition of the sky permitted. I regret that the short time at my disposal for the preparation of this report will not admit of a synopsis of the observations being made to accompany it. The results have, however been published from the commencement of the observations in January, 1888, up to 28th May last, in the transactions of the Royal Society of Canada, together with a brief discussion of the condition of the sun's visible surface during the period covered by the observations.

Soil Temperatures.

During the past two years observations of soil temperature have been taken daily, the primary object being to establish somewhat more definitely the relation of such temperatures to vegetation. An important part of this work relates to the changes attending the penetration of frost in autumn, the influence of snow as a protective covering, and the changes incident to the opening of the ground in spring. For this reason the period of observation embraces the entire year, instead of covering only the spring and summer months, as is customary. It may also be stated, in this connection, that observations are being made by Prof. Penhallow on root penetration and the movement of sap in trees, in order to complete the necessary data. These will be published as soon as circumstances will permit.

This work, which it is expected will be carried on continuously for some years, is conducted under the auspices of the Natural History Society of Montreal. The expense attending the construction of the necessary instruments was met by a grant from the Elizabeth Thompson Science Fund. Reference may be made to the

annual reports of the observatory for further information concerning the inauguration of this work. The following is a brief description of the instrument used :— Couples of copper and iron are placed in the ground at the required depths. A wire passes from each couple to a switch-board in the observing room, and there is a return wire common to all the couples, which—in the observing room—passes through a delicate galvanometer and a couple similar to those in the ground, to make connection with the other wires at the switchboard. The galvanometer is made to read zero on the circle when the circuit is open. If now the circuit be closed at the switch-board the needle will be found to deflect, but may be brought back by bringing the inside couple to the same temperature as that in the ground. For this purpose the inside couple is immersed in water, or, in winter, in a mixture of snow and water. When the balance is established the temperature of the water is the same as that of the ground at the depth of the outside couple.

In this the first report upon the work it is proposed simply to place on record the results thus far obtained, leaving to the future such deductions as it may be possible to draw. The temperatures in degrees centigrade—as given—are averages of ten-day periods, while the figures for snow and rainfall express the total precipitation for the same periods. The accompanying chart of curves will exhibit the relations thus far established.

The soil terminals of the thermometer are located at a distance of about fifty feet from the air terminal, and about twenty feet from the observatory. The depths thus far operated upon are one, two, three or four feet from the surface, a limitation imposed by the formation of the locality, which is at present the only one available within working limits of the instrument.

The soil in which the instrument is placed is a well-drained and rather gravelly loam for a depth of four feet three inches, at which point the bed rock is reached. It will, therefore, be observed that the lowest point of observation is only about three inches from the rock. Grass has been allowed to grow freely about the instrument, though kept rather short, thus establishing the conditions of land in sod.

DATE.		TEMPERATURES IN DEGREES CENTIGRADE.					TOTAL PRECIPITATION.		Estimated depth of snow on the ground.
		1 Ft.	2 Ft.	3 Ft.	4 Ff.	Air.	Rain.	Snow.	
1888.									
November	11.....	6.3	6.9	8.0	9.3	6.0	3.83	0.5	.....
	21.....	2.3	4.2	6.8	10.1	- 2.0	0.41	3.1	1.4
December	1.....	0.4	2.4	5.4	8.5	- 4.5	0.76	7.4	4.5
	11.....	0.9	2.3	4.7	7.8	- 2.5	0.01	2.2	3.6
	21.....	0.8	2.6	4.6	7.5	-10.2	0.81	10.9	3.6
	31.....	0.4	1.4	4.0	6.6	- 3.1	0.75	3.8	4.7
1889.									
January	10.....	0.5	2.2	3.7	5.6	- 2.5	1.62	6.3	2.5
	20.....	0.6	2.1	3.5	5.5	- 5.7	0.23	2.4	4.0
	30.....	0.2	1.4	3.0	4.7	- 9.2	0.03	29.4	19.0
February	9.....	0.2	0.9	2.8	3.0	-14.5	0.00	22.0	28.6
	19.....	-0.4	0.7	2.2	4.1	- 8.3	0.30	10.3	35.5
March	1.....	-0.1	0.9	2.2	3.5	-11.5	0.00	2.4	31.0
	11.....	-0.3	0.6	2.2	3.5	- 2.2	0.34	11.1	29.0
	21.....	-0.2	0.9	2.4	3.3	- 1.4	0.08	3.1	26.7
April	31.....	-0.5	0.4	1.8	2.8	- 1.8	0.20	1.1	21.0
	10.....	-0.5	0.2	1.5	2.7	1.9	0.00	0.1	12.0
	20.....	3.7	1.0	0.2	0.0	8.8	0.15	.....	2.6
	30.....	6.4	7.0	4.7	2.4	8.6	2.04	.....	.....
May	10.....	12.7	9.5	6.4	3.3	14.8	0.14	.....	.....
	20.....	15.3	12.9	9.6	4.3	16.3	1.36	.....	.....
	30.....	14.7	13.3	12.6	7.7	10.9	1.55	.....	.....
June	9.....	15.5	13.1	11.3	7.9	14.9	2.35	.....	.....
	19.....	18.8	16.5	13.6	8.9	17.5	0.93	.....	.....
	29.....	19.2	16.9	14.6	9.8	18.4	1.47	.....	.....
July	9.....	21.1	19.9	17.1	11.1	21.7	1.39	.....	.....
	19.....	20.4	18.8	16.9	12.6	19.1	1.56	.....	.....
	29.....	21.5	19.1	17.8	13.6	19.3	4.17	.....	.....
August	8.....	21.2	19.4	17.9	14.3	19.2	1.12	.....	.....
	18.....	18.7	17.5	17.4	14.6	16.6	1.50	.....	.....
	28.....	18.9	17.3	16.8	14.2	18.5	0.25	.....	.....
September	7.....	19.6	17.6	16.8	14.1	19.9	0.12	.....	.....
	17.....	18.4	17.7	17.2	14.5	19.1	1.59	.....	.....
	27.....	13.6	14.3	15.9	15.7	11.5	2.68	.....	.....
October	7.....	11.0	12.2	14.0	14.7	8.6	2.46	.....	.....
	17.....	7.1	8.1	10.4	12.9	5.7	0.12	.....	.....
	27.....	5.0	6.3	8.7	11.1	3.1	0.47	.....	.....
November	6.....	4.7	5.7	7.9	10.7	4.3	1.11	0.8	.....
	16.....	4.3	5.4	7.3	9.8	2.1	0.29	0.0	.....
	26.....	3.0	4.4	6.7	9.3	1.7	1.39	.....	.....
December	6.....	1.2	3.5	6.0	9.1	- 7.1	0.00	17.5	13.0
	16.....	1.0	2.7	4.9	7.9	- 3.6	1.39	2.0	9.0
	26.....	0.9	2.2	4.2	6.5	- 1.1	1.55	8.5	5.0

DATE.		TEMPERATURE IN DEGREES CENTIGRADE.					TOTAL PRECIPITATION.		Estimated depth of snow on the ground.
		1 Ft.	2 Ft.	3 Ft.	4 Ft.	5 Ft.	Rain.	Snow.	
1890.									
January	5.	1.3	2.7	4.4	6.6	- 6.1	0.70	7.00	5.0
	15.	1.9	2.3	3.9	5.7	-11.9	1.00	11.40	10.0
	25.	1.4	1.8	3.2	5.0	-11.9	0.18	12.80	19.0
February	4.	1.1	1.6	3.3	5.1	- 6.6	0.41	0.60	17.0
	14.	0.8	1.6	3.2	4.8	- 8.1	1.29	13.20	20.0
	24.	0.8	1.5	2.8	4.1	-11.7	0.20	13.90	30.0
March	6.	1.0	1.6	3.0	4.1	- 5.1	0.96	0.00	28.0
	16.	0.7	1.5	2.7	3.7	- 2.6	0.30	0.00	20.0
	26.	0.4	0.9	2.3	2.9	- 1.6	0.18	1.40	11.0
April	5.	0.5	1.1	2.3	2.8	- 0.4	0.65	10.30	11.0
	15.	0.6	0.2	0.9	1.1	4.7	0.25	0.20	6.0
	25.	5.3	2.8	2.0	1.5	5.3	0.12	.....	1.0
May	5.	7.4	5.2	4.5	2.6	6.7	1.75	2.80	.....
	15.	9.1	7.1	5.9	3.6	9.2	1.47	.....	.....
	25.	11.7	10.0	8.2	4.9	11.8	1.72	.....	.....
June	4.	15.0	12.1	9.6	5.9	15.1	1.58	.....	.....
	14.	15.5	13.5	11.7	7.8	15.3	0.90	.....	.....
	24.	17.6	14.7	12.4	8.2	19.4	0.92	.....	.....
July	4.	21.1	17.8	14.8	9.8	21.7	0.65	.....	.....
	14.	20.7	18.3	16.1	11.5	19.4	0.20	.....	.....
	24.	20.7	18.3	16.5	12.1	18.5	1.02	.....	.....
August	3.	21.7	18.8	16.6	12.2	22.8	1.07	.....	.....
	13.	21.9	19.9	17.8	13.3	20.8	1.56	.....	.....
	23.	18.7	17.5	17.0	14.5	15.7	2.71	.....	.....
September	2.	16.5	15.3	15.4	14.5	15.5	3.65	.....	.....
	12.	17.2	15.7	15.4	13.9	17.0	2.29	.....	.....
	22.	14.9	14.6	15.1	14.1	14.3	0.98	.....	.....
October	2.	11.1	12.0	13.5	13.8	14.1	0.30	.....	.....
	12.	10.1	11.1	12.9	13.5	8.7	0.80	.....	.....
	22.	8.8	8.0	10.8	12.3	7.7	1.64	.....	.....
November	1.	6.8	7.6	9.7	11.7	4.6	0.30	.....	.....

Mr. E. H. Hamilton, B.A. Sc., continues to fill the office of assistant in the observatory, and to perform his duties in that connection faithfully and with ability.

I have the honour to be, Sir,
Your obedient servant,
C. H. McLEOD,
Superintendent.

McGILL COLLEGE, MONTREAL, 1st Dec., 1890.

APPENDIX No. 3.

REPORT OF THE CHAIRMAN OF THE BOARD OF STEAMBOAT INSPECTION FOR THE YEAR ENDING THE 31ST DECEMBER, 1890.

CHAIRMAN'S OFFICE, OTTAWA, 1st Dec., 1890.

Hon. CHARLES H. TUPPER,
Minister of Marine and Fisheries.
Ottawa.

SIR,—I have the honour to submit herewith my annual report for the year ending the 1st December, 1890.

Tables A, B, C and D show:—

A.—The number of steamboats in each inspection division, and the total number the Dominion, with their gross tons.

B.—The amount of dues and fees collected.

C.—The increase and decrease in 1890, as compared with the year 1889, in number of steamers, gross tons, and revenue from inspection, dues and fees.

D.—The number of steamers added to each inspection division, and to the Dominion, with the gross and registered tons.

BOARD MEETINGS.

There being a quorum of the Board resident in Toronto up to the 3rd of February, 1890, sessions of the Board were held on the 15th, 16th, 17th, 21st, 24th and on the 30th of January, 1890, for the examination of engineers, the results of which were forwarded to the Department.

On the 3rd of February the Chairman of the Board of Steamboat Inspection removed from Toronto and took up his residence at Ottawa.

A quorum of the Board met at Toronto on the 12th of March and 5th of May, for the examination of engineers, and the passing on examinations, of engineers taken in the several inspection divisions since the last Board meeting; the Board also met at Toronto on the 29th of July for the examination of Mr. John Alexander Thompson for the office of Steamboat Inspector (Boiler Inspector) at Victoria, British Columbia, made vacant by the retirement of Mr. Wm. A. Russell, and for the examination of engineers, and other pertinent matters, the members present being:

	Residence.
O. P. St. John, Boiler Inspector.....	Toronto.
James Johnston, do	do
Capt. T. Harbottle, Hull Inspector.....	do
W. J. Meneilley, Chairman of Board.....	Ottawa.

Mr. Thompson passed a satisfactory examination for the office of Steamboat Inspector.

Mr. St. John presented a letter received by him from Mr. Alexander McDonald, Chief Engineer of the Canadian Pacific Railway Company's new car ferry steamer "Ontario," plying between Windsor, Ont., and Detroit, Michigan, U.S.A., on the Detroit River, relating to the service required of engineers and other officers on this vessel, there being two separate engines, and separate engine-rooms, one on each side of the vessel, on the guards, not connected, and no direct communication between them.

"The Board is of the opinion, unanimously, that there should be a competent certificated engineer on watch at each engine, in each engine-room, while steam is on the boiler.

"The Board is also unanimously of the opinion that the service now required on this steamer of working the officers of the steamer for an average of at least 16 hours out of the 24 is too long, and is not a safe practice, and is not in the interest of the public service, this vessel carrying a large number of passengers both day and night on the Detroit River, where there is an enormous traffic of steamers and vessels of all classes, going up and down the river, and crossing the track of the car ferry steamer continually, requiring constant and close care and watchfulness on the part of all the officers on watch on the vessel."

Copies of the foregoing resolutions of the Board were forwarded to the Department, and to Mr. McDonald, on the 5th of August. The Board closed its session on the 8th August, when the proceedings were fully reported to the Department.

SAFETY VALVES.

My recommendation of date 28th December, 1889, in regard to safety valves, was adopted, and by Order in Council of date the 1st day of July, 1890, under provisions of the 1st section of the Act 53 Victoria, chapter 17, rules governing the construction and operation of safety valves for steamboat boilers were approved by His Excellency, replacing regulations previously in use, from sections 92 to 102, inclusive, the new rules being practically in accord with similar rules in force in the United Kingdom.

No penalties for violations of the Steamboat Inspection Laws have been reported as collected.

CASUALTIES.

Six lives are reported as lost on steamboats throughout the Dominion during the year, five the result of collision between the steamer "Catherine," of Kingdom, and the American steamer "St. Lawrence," on the River St. Lawrence, near Alexandria, and one by falling down an open hatchway on the S.S. "Sardonyx," in British Columbia. The casualties and minor accidents to steamboats in the several divisions were as follows:—

West Ontario and Huron Division.

There has been no casualty in this division involving loss of life.

The steamer "Algonquin," while on her way up Lake Ontario on the 24th of April, broke the valve stem of her steam reversing gear and had to be towed back to Kingston for repairs.

In the month of July the steamer "Empress of India" had a new paddle shaft fitted to her, to replace one which was found to be cracked.

The steamer "Cuba," while on a voyage from Chicago to Montreal, ran on Grey's Reef, Lake Michigan, on the 13th July, during a heavy fog. The vessel was released, with damage to the vessel of \$500, and to the cargo \$5,000.

The steamer "Isaac May," on a voyage from Collin's Bay to Spanish River, took fire off Port Burwell, Lake Erie, on the 16th July, around the boilers. The steamer "Saranac," of Buffalo, U.S.A., came alongside, extinguished the fire, and towed the damaged vessel to Buffalo. She is being repaired at Port Robinson; the damage to the vessel and machinery being about \$18,000.

The tug "Annie Watt" was sunk by collision with the steamer "W. M. Alderson," between Wiarton and Lion's Head, Georgian Bay, in 45 fathoms of water. She is a total loss; value, about \$5,000.

The tug "Ripple" had her upper works destroyed by fire while lying at her dock at Wallaceburg, on the 13th September.

The steam barge "Bruno," of Toronto, on a voyage from Cleveland, Ohio, U.S.A., to Algoma Mills, Ontario, coal laden, struck on Magnetic Reef, Lake Huron, on the 5th of November, and is a total loss. No lives were lost, although the crew and officers suffered a good deal from the cold and exposure. The vessel was insured for \$10,000; cargo not insured.

The steamer "City of Midland," of Collingwood, struck on Limestone Island, Georgian Bay. She was released shortly afterwards, and docked at Collingwood,

when it was found that she had sustained no damage to her hull, except bending the rudder post and breaking the shoe. The damage to the machinery was a broken steam pipe (copper), and the injection pipe broken on side of vessel; the boiler was also slightly shifted. The vessel was repaired, and started running again.

East Ontario Division.

The tug "McArthur" was destroyed by fire on 26th April while lying at her wharf at Collin's Bay.

The crank pin and main centre of the engine of the steamer "Hero" were found to be broken while on her voyage to Picton. She returned to Kingston and had the necessary repairs made.

June 30.—The tug "Glide" broke the cross-head on the after engine.

The steam yacht "Catherine," at about 11 p.m. on the 17th July, was lost between Alexandria and Grenadier Island, on the St. Lawrence River, by collision with the American steamer "St. Lawrence." Four passengers of the steamer "Catherine" were, with her engineer, drowned.

The steamer "Norseman" broke her cross-head when about 18 miles from Charlotte, on Lake Ontario. She was worked back to port and another cross-head fitted.

On 22nd October, at about 1.35 a.m., the steamers "Resolute" and "Reliance" had a collision on Lake Ontario between Oswego and Deseronto; the "Reliance" being disabled was, towed into Deseronto by the "Resolute," which was very slightly damaged. They both belong to the Deseronto Navigation Co., (Limited).

Montreal Division.

The steamer "Dagmar" was destroyed by fire while in winter quarters at Como in the month of April.

The strap of the working-beam of the steamer "Sovereign" broke when the vessel was on her upward trip, breaking the cylinder and cover, guides, piston and follower, and bending the piston rod.

The tug "Resolute" was destroyed by fire on the 22nd July while lying at her wharf at Ottawa.

The steamer "Olive," on her upward trip, on the 16th September, struck a rock near St. Anne's, filled and sank. She was pumped out raised, and repaired.

The tug "Ivy" was burned on the 21st September while lying at anchor off the company's yard at Hull. She was not in commission this season.

Quebec Division.

On the 23rd of June the steamer "Brothers" broke her crank pin, strap, cylinder, piston, and guide.

On the 25th June the tug "William" stranded on Berthier Islet, near the light-house, on her way down the river.

On the 11th July the tug "Pioneer," with booms in tow on Lake St. John, was driven on a shoal by a gale, and went to pieces.

The steamer "Quebec" broke her starboard paddle shaft on the 12th July on her voyage to Montreal.

The tug "William O'Brien" was burned at her wharf to the water's edge, on the 24th of August.

The ferry steamer "Laprarie" ran on a shoal near the Victoria Bridge, stove five planks, on the 17th September. She did not make much water, and was docked and repaired.

On the 22nd September the steamer "Algerian," on her way to Toronto, struck the pier of the canal at Cornwall, and damaged her stem and stove in two plates, which were repaired.

Maritime Provinces Division.

The ferry steamer "Norwegian" was totally destroyed by fire at the wharf at Port Mulgrave on the 16th February.

The boiler of the steamer "May Queen" was made unfit for further use, owing to insufficiency of water in it, while getting up steam at her wharf at Sydney, Cape Breton.

The steamer "Princess Beatrice" ran ashore in a fog off Isaac's Harbour, N.S. She became a total wreck.

The steamer "Jessie A. Campbell" became a total loss on rocks near Hopewell, N.B.

Manitoba, Keewatin and N. W. Territories, Division.

There are no casualties in this division, the minor accidents being the steamer "Collville" breaking a flange off one of her screws, and the steamer "Red River" had her screw get loose.

British Columbia Division.

The steamer "Lottie" broke her shaft on 11th January, out of Departure Bay. She was towed to Victoria and repaired.

The steamer "Alert" was injured by fire while lying at anchor in Cadboro Bay, about 5 a.m. 28th January.

The chief engineer of the steamer "Sardonyx," Mr. H. G. Fox, fell down a hatchway that was left open over night, to take in coal the next morning, and was killed, the vessel at the time being beached to examine her bottom. She was lost on the 13th June while on a voyage from Victoria to Queen Charlotte Island, by striking on an unknown rock in Hecate Straits, off Cape Ball. Loss, \$50,000.

The steamer "Skidegate" broke her crank shaft, cylinder and bed-plate in the Gulf of Georgia, on 16th February. She was repaired in Victoria.

The steamer "Clyde," on the 23rd April, dragged her anchors during a gale in English Bay, was driven ashore, broke both propellers, the sea sweeping away everything loose. She was released, taken to Vancouver, and repaired.

The back-length of the furnace of the steamer "Velos" collapsed on the 5th August from accumulation of oil and dirt. The vessel was towed to Victoria, and the front head, tubes and furnace were taken out of boiler, a new back-length fitted, and all replaced good, and boiler re-tested.

The steamer "Etta White" struck a rock in Welcome Pass, and sunk in seven fathoms of water on 1st August. She was afterwards raised and repaired.

I have the honour to be, Sir,

Your most obedient servant,

W. J. MENEILLEY,

Chairman Board of Steamboat Inspection.

A.—NUMBER and Gross Tonnage of Steam Vessels in the Dominion during the Year ended 31st December, 1890.

Divisions.	Number of Steamers.	Gross Tonnage.
West Ontario and Huron.....	349	67,540·00
Kingston.....	135	17,375·69
Montreal.....	143	21,062·00
Quebec.....	139	37,183·50
Maritime Provinces.....	187	30,414·86
Manitoba, Keewatin and North-West Territories.....	56	5,174·80
British Columbia.....	94	16,668·04
Total.....	1,103	195,418·89

B.—DUES and Fees collected on Account of Steamboat Inspection during the Year ended 31st December, 1890.

Divisions.	Amount.
	\$ cts.
West Ontario and Huron.....	6,865 75
Kingston.....	2,083 75
Montreal.....	2,246 20
Quebec.....	3,433 92
Maritime Provinces.....	2,966 37
Manitoba, Keewatin and North-West Territories.....	576 96
British Columbia.....	1,544 01
Total.....	19,716 94

C.—NUMBER of Steam Vessels, and their Gross Tonnage, and Amount of Tonnage Dues and Inspection Fees collected during the Years 1889 and 1890, ending the 31st December.

Years.	Number of Steamers.	Gross Tonnage.	Inspection Dues and Fees.
			\$ cts.
1890.....	1,103	195,418·89	19,716 94
1889.....	1,085	196,898·01	12,952 27
Increase.....	18		6,764 77
Decrease.....		1,479 12	

D.—STEAM VESSELS added to the Dominion during the Year ended 31st December, 1890.

Divisions.	Number of Vessels.	Gross Tons.	Registered Tons.
West Ontario and Huron.....	25	6,558·00	4,324·00
Kingston.....	6	62 28	42 74
Montreal.....	6	325·00	239·00
Quebec.....	5	471·70	146 16
Maritime Provinces.....	13	2,735·84	1,427 15
Manitoba, Keewatin and North-West Territories.....	6	227 48	139 39
British Columbia.....	19	1,826·83	1,090 32
Total.....	80	12,207·13	7,408·76

APPENDIX No. 4.

REPORT OF CHAIRMAN OF THE BOARD OF EXAMINERS OF MASTERS
AND MATES.

OTTAWA, 3rd November, 1890.

SIR,—I have the honour to submit the report of the proceedings of the Board of Examiners of Masters and Mates for ten months ending 31st October, 1890.

The examinations at the different ports were held as follows:—

Twelve at Halifax, 7 at Yarmouth, 9 at St. John and 1 at Quebec—29 in all.

There were 117 applications and 34 failures; 45 masters and 38 mates received Competency Certificates. Of these, 38 masters were granted Foreign-going Certificates and 7 Coasting; 33 mates and 2 second mates obtained Foreign-going Certificates and 3 mates Coasting.

It will thus be seen that the number of Certificates of Competency granted to candidates amounted to 83 in all. The total number of certificates issued by the Department (including Competency, Service and Renewal Certificates) was 133, and fees to the amount of \$900 were collected at the four ports above mentioned.

I have the honour to be, Sir,

Your obedient servant,

W. H. SMITH,

Chairman.

The Deputy Minister of Marine,
Ottawa.

RESULT of the Examinations held at the different Ports.

PORT.	TIME.		APPLICATIONS.		CERTIFICATES GRANTED.		FAILURES.		Fees.
	Month.	Day.	Master.	Mate.	Master.	Mate.	Master.	Mate.	
Halifax.....	Jan.	9th & 10th..	1	1	1	2			\$ cts. 20 00
Yarmouth.....	do	21st & 22nd..	1	2	1			3	19 00
Halifax.....	Feb.	4th & 5th..	1	3	1	1			18 00
St. John.....	do	13th & 14th..	1	2	1			1	15 00
Quebec.....	March.	3rd & 4th..	1	1	1	1			15 00
Halifax.....	do	11th & 12th..		1		1			5 00
St. John.....	do	13th & 14th..	2	1	2	1			20 00
Yarmouth.....	do	19th & 20th..		4		4			15 00
Halifax.....	April	1st, 2nd, 3rd.	5	2	4	1	1	1	54 00
St. John.....	do	15th & 16th..	2	2	2	1		1	30 00
Halifax.....	May.	7th, 8th, 9th.	2	3	1	1	1	2	35 00
St. John.....	do	15th & 16th..	4	3	3	1	1	2	50 00
Halifax.....	June.	4th & 5th..	3	*4	2	2	1	2	28 00
St. John.....	do	11th & 12th..	4	3	4	2		1	40 00
Yarmouth.....	do	26th & 27th..	2	1	2	1			23 00
Halifax.....	July.	10th & 11th..	6	2	5	1	1	1	50 00
St. John.....	do	15th & 16th..	1	3		2	1	1	20 00
Yarmouth.....	do	29th & 30th..	1	3	1	2		1	30 00
Halifax.....	Aug.	1st & 2nd..	3	2	3	1		1	30 00
St. John.....	do	7th & 8th..	1	2	1	2			14 00
Yarmouth.....	do	29th.....	2				2		10 00
Halifax.....	Sept.	5th & 6th..	1	1	1	1			12 00
do	do	8th, 9th, 10th.	2	3	1		1	3	35 00
St. John.....	do	11th & 12th..	3	1	3	1			35 00
Yarmouth.....	do	26th & 27th..	3		2		1		18 00
Halifax.....	Oct.	3rd.....		*1		1			4 00
St. John.....	do	13th & 14th..	1	4	1	4			30 00
Halifax.....	do	16th 17th 18th	3	2	1	1	2	1	20 00
Yarmouth.....	do	30th.....	1	3	1	2		1	20 00
Total...	10	59	57	61	45	38	12	22	715 00

CERTIFICATES of Service Granted.

COASTING.			INLAND.		
Master.	Mate.	\$ cts.	Master.	Mate.	\$ cts.
24.....		96 00	4.....		16 00
	6.....	12 00		1.....	2 00
24	6	108 00	4	1	18 00

Total number of Service Certificates..... 35
Total amount of fees for Service Certificates..... \$126

RENEWAL Certificates Issued.

COMPETENCY.			SERVICE.		
Master.	Mate.	\$ cts.	Master.	Mate.	\$ cts.
9.....	.....	45 00	.....	.....	.....
.....	2.....	5 00	4.....	.....	9 00
9	2	50 00	4	.....	9 00

Total number of renewals issued..... 15
Total amount of fees for renewals..... \$59

Of the four renewals of Service Certificates, two were for foreign-going, and two for coasting.

W. H. SMITH,
Chairman.

APPENDIX No. 5.

REPORT ON GEORGIAN BAY SURVEY FOR THE SEASON OF 1890.

GEORGIAN BAY SURVEY,
OTTAWA, October 20th, 1890.

The Honourable,
The Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to inform you that I sailed from Owen Sound in the Steamer Bayfield on the 1st of May, to commence the operations of the past summer, returning thither on the 18th of October. Mr. Stewart and shore party were landed on the first mentioned date at Parry Sound, to commence the extension of the survey of the portion of the coast discontinued on the 4th of September, 1889.

I spent the first week in May by building a series of beacons, to assist in the navigation of the portion of the inside channel leading from Parry Sound to Point au Baril, surveyed in 1889.

It is very necessary that these small beacons be kept in condition by the light-keeper at Point au Baril, to enable steamers to avoid 15 miles of rough water outside.

On the completion of this work and the placing of a couple of buoys for the first time on two outlying rocks discovered in 1889 (the one off Black Bills and the other near the entrance to Byng Inlet), I left this shore of Georgian Bay for the portion of the north channel of Lake Huron comprised between Mildrom Bay and Bruce Mines, shown on the diagram attached to my report to you in 1889 as "partly surveyed."

This locality was reached the 10th of May and its survey completed on the 8th of August. A vessel can now proceed from Owen Sound to Sault St. Marie, a distance of 220 miles over recently surveyed waters.

Calling at Owen Sound for coal, Parry Sound was reached on the 12th of August, and for the remainder of the season the whole party was employed on the coast between the Limestone Islands and Moose Deer Point of chart No. 327, including the several channels leading to the town of Parry Sound.

The season was the finest yet experienced, there being few days before the 10th of the present month on which some branch of the work could not be undertaken. The atmosphere was remarkably free from smoke.

The number of nautical miles charted was 480; lineal miles of sounding done in vessel, 1,240, while the boats did 850.

The work between the Limestone Islands and Moose Deer Point (see chart No. 327) being incomplete, will require to be taken up the first thing next summer. In addition to the general outside traffic along this coast, the numerous islands and occasional inside channels are inducing tourists to make it a summer resort.

These unsurveyed waters, with many sunken rocks in them render navigation extremely hazardous, and only the unceasing vigilance, powers of observation, retentive memories and dexterity of handling their vessels enable the masters of the passenger and mail steamers on this coast to avoid the dangers as well as they do. The confusion and loss of life that would ensue upon one of these large excursion steamers going—as tourists, must of course—at a high rate of speed and striking one of these small rocks, with usually deep water alongside them (in which she would probably founder) may easily be imagined, especially when it is remembered that the passengers are largely composed of women and children.

It is in the present locality of my work that the steamer "Waubuno" went down with all hands a few years ago. Several temperatures of the bottom were taken, which, with those taken in previous years, show that the bottom water stands at about 39 at its maximum, cooling down to 35 Fahrenheit in the winter.

My two assistants, Messrs. Stewart and Campbell, have shown their usual zeal. Captain A. M. Macgregor—whom you are aware has been with me since the commencement of the survey—has, in addition to his general pilotage duties, rendered valuable assistance in reconnoitering for anchorages for the vessel to serve as bases of operations, without which it would be difficult to carry on the work.

The confidence I have in my two engineers, Messrs. John Nesbit and William Linter, always having their engine under command, and being constantly at their posts, has enabled me to take the vessel into closer proximity to dangers than I should otherwise consider prudent.

Of the crew of 21 men, there has not been this year a single case of insobriety or misconduct.

To this, I consider the small bonus which you are pleased to sanction my promising them at the end of the season contributes to in a large degree. The time of my two assistants and myself will be fully occupied this winter in preparing copies of the past summer's work for the engraver, and writing accompanying sailing directions.

I have the honour to be, Sir,

Your obedient servant,

J. G. BOULTON,

Staff Commander, R.N., and Admiralty Surveyor.

APPENDIX

TELEGRAPH, SEMAPHORE AND SIGNAL
RIVER AND GULF
SOUTH SHORE OF THE

Signal Stations.	Telegraph Offices.	Light House.	Flag Station.	Semaphore Station.	Marine Miles from Quebec.	Telegraph Co. Working Lines.
1 L'Islet.....	Tel. Office.		Flag		43	Great North-Western Co....
2 Rivière du Loup.....	do	Light House..	do		85	do
3 Father Point.....	do	do	do		155	do
4 Little Metis.....	do	do	do		175	do
5 Matane	do	do	do		196	do
6 Cape Chatte.....	do	do	do		230	do
7 Martin River	do	do	do		255	do
8 Cape Magdalen.....	do	do	do		290	do
9 Fame Point	do	do	do		320	do
10 Cape Rosier	do	do	do		354	do

NORTH SHORE OF THE

11 Port Neuf.....	Tel. Office.	Light House..	Flag		150	Dom. Govt. and G. N. W. Co.
12 Manicouagan.....	do	do	do		180	do
13 Pointe de Monts.....	do	Light House..	do		220	do
14 Egg Island	do	do	do		241	do

GASPÉ COAST

15 Cape Despair.....	Tel. Office.	Light House..	Flag		384	Great North-Western Co....
16 Point Maquereau	do	do	do		408	do

COAST OF NEW

17 Point Escuminac....	Tel. Office.	Light House..	Flag		469	Dom. Govt. and G. N. W. Co.
------------------------	--------------	---------------	------------	--	-----	-----------------------------

ISLAND OF

18 West Point.....	Tel. Office.	Light House..	Flag		328	Dom. Govt. and G. N. W. Co.
19 South-West Point....	do	do	do		356	do
20 South Point	do	do	do		413	do
21 Heath Point.....	do	do	do		450	do

MAGDALEN

22 Grosse Isle.....	Tel. Office.	do	Flag		475	D. Govt., W. U. & G. N. W. Co.
23 Amherst Island.	do	Light House..	do		475	do

CAPE BRETON,

24 Meat Cove.....	Tel. Office.	Light House..	Flag		530	D. Govt., W. U. & G. N. W. Co.
25 Low Point.....	do	do	do	Semaphore	575	do

ST. PAUL'S

26 Main Station.....	Telephone	do	Flag		536	D. Govt., W. U. & G. N. W. Co.
----------------------	-----------	----------	------------	--	-----	--------------------------------

NEWFOU

27 Cape Ray.....	Tel. Office.	Light House..	Flag		555	D. Govt., Anglo-Amer. Cable Co., W. U. & G. N. W. Co.
------------------	--------------	---------------	------------	--	-----	---

C.

STATIONS, MARINE DEPARTMENT, CANADA.

OF ST. LAWRENCE.

RIVER ST. LAWRENCE.

Rate per ten words and additional words.	Date when Established.	Name of Agent.	Post Office.	County.	Province.	Salary per Annum from Marine Department.
25c. & 1c.	Oct. 28, '79.	Mrs. J. B. E. Fortin	L'Islet	L'Islet	Que	\$50
do	Nov. 16, '81.	L. T. Pinze	Rivière du Loup (en bas)	Témiscouata	do	50
do	Nov. 22, '79.	John McWilliams	Father Point	Rimouski	do	50
do	Nov. 17, '79.	Jules Martin	Little Metis	do	do	50
do	Nov. 5, '79.	P. Desjardins	Matane	do	do	50
do	Sept. 17, '79.	Treflé Côté	Cape Chatte	Gaspé	do	50
do	Sept. 23, '79.	Jean Gauthier	Martin River	do	do	50
do	Oct. 23, '79.	J. F. Sasseville	Cape Magadalen	do	do	50
do	Oct. 9, '79.	James Ascah	Fox River	do	do	50
do	Oct. 14, '80.	J. B. Vien	Cape Rosier	do	do	50

RIVER ST. LAWRENCE.

40c. & 2c.	June 1, '83.	Dorelas Tremblay	Port Neuf (en bas)	Saguenay	Que	\$50
do	Aug. 15, '83	P. O. Bonenfant	Manicouagan	do	do	50
do	Oct. 19, '83.	L. F. Faffard	Point de Monts	do	do	50
do	Oct. 12, '86.	Paul Côté	Egg Island	do	do	50

OF THE GULF.

25c. & 1c.	June 17, '80.	James Beck	Cape Despair	Gaspé	Que	\$50
do	May 22, '80.	Auguste Bertrand	Port Daniel	do	do	50

BRUNSWICK.

40c. & 2c.	July 2, '85.	Henry Phillipps	Point Escuminac	Northumberland	N.B.	\$50
------------	--------------	-----------------	-----------------	----------------	------	------

ANTICOSTI.

\$1.05 & 6c.	Oct. 1, '81.	Auguste Malouin	Anticosti Id. <i>viâ</i> Gaspé	Gaspé	Que	
do	Oct. 18, '80.	E. Pope	do	do	do	
do	July 27, '81.	Jean Nadeau	do	do	do	
do	July 20, '81.	Thomas Gagné	do	do	do	

ISLANDS.

\$1.05 & 7c.	Aug. 17, '80.	A. Le Bourdais	Magadalen Id. <i>viâ</i> Pictou	Gaspé	Que	
do	June 11, '81.	William Cornier	do N.S.	do	do	

NOVA SCOTIA.

30c. & 2c.	Nov. 7, '81.	A. R. MacDonald	Meat Cove, C.B.	Victoria	N.S.	
do	Aug. 1, '81.	J. G. Peters	Low Point, C.B.	Inverness	do	\$50

ISLAND.

50c. & 3c.	1890	S. C. Campbell	North Sydney, C.B.	Victoria	N.S.	
------------	------	----------------	--------------------	----------	------	--

NDLAND.

\$1.05&10c.	Nov. 3, '82.	E. R. Rennie	Cape Ray		Nfld.	\$50
-------------	--------------	--------------	----------	--	-------	------

H. J. McHUGH, *Inspector, Signal Service.*

APPENDIX No. 6.

REPORT ON SIGNAL SERVICE.

QUEBEC, 28th November, 1890.

WM. SMITH, Esq.,
Deputy Minister of Marine, Ottawa.

SIR,—I have the honour to submit the following report as to the service for the season of 1890.

As in the preceding season of 1889, the Department had reports from the stations in the lower part of the River and Gulf of St. Lawrence recording the weather, wind and movement of ice during the months of January, February, March and April. The last reports of ice were on the 30th of April, and reported by the agents at the following stations: Cape Ray, Newfoundland; Meat Cove, Cape Breton, and Low Point, at the entrance to Sydney harbour.

From the 1st to the 18th April three reports only per week were received and forwarded, as in previous seasons, to the Boards of Trade, Montreal, St. John, N.B. and Quebec, and to the Chamber of Commerce at Halifax, N.S.; also to the press of Montreal and Quebec; to agents of steamship lines; to the pilots of the St. Lawrence; to the Immigration Agent and Custom House, and Agent of the Department of Marine, Quebec; also to Messrs. H. Fry & Co., Lloyd's agent.

From the 19th to the 27th April but one report daily was received, and commencing on the 28th of April two reports daily were received and forwarded as above. This was three days later than in 1889, owing to the SS. "Lake Nepigon" being detained in the ice in the vicinity of Cape Ray for several days. She was first reported inwards off that station at 4.30 p.m. on the 21st April, being the first trans-Atlantic vessel reported inwards to the St. Lawrence and arrived at Quebec only on the 29th April at 2 p.m.

As in the previous season, St. Pierre Miquelon reported no ice seen off that station during the months of April and May.

Heavy, open to close-packed ice was reported from the north shore, Anticosti, Magdalen Islands, Meat Cove and Cape Ray, during the greater part of the season, and through the prevalence of west and north-west winds the ice in April was driven towards the entrance to the Gulf and along the west coast of Cape Breton.

Full information was supplied from the Bureau here to the agents at Anticosti, Meat Cove, C.B., Cape Ray and St. Pierre Miquelon, as to the movements of ice in the River and Gulf of St. Lawrence; also, the state of the river from Quebec to Montreal, for the guidance of any vessel calling for such information.

Sydney Harbour, C.B., remained open until the 24th January, when the harbour was blocked with ice. This was exactly one month earlier than in 1889. The harbour was again clear of ice and free to vessels on the 19th of April, ten days earlier than in 1889.

The harbour of Pleasant Bay, Magdalen Islands, was open on 2nd April, ten days later than in 1889. Fifteen schooners cleared on this and following days for sealing.

The SS. "Beaver," Captain LeMaistre, from Pictou, N.S., was reported at the Magdalen Islands on the 18th April, twelve days later than 1889.

The Gut of Canso, N.S., was reported open on the 23rd of April, sixteen days later than in 1889.

From the 25th to the 29th of March twenty-two schooners left Esquimaux Point for the sealing grounds; the tonnage aggregated 877 tons, with 206 men on board. The catch was a failure; the schooners got caught in field ice and drifted to and fro with it.

The steam schooner "Diver," 86 tons, Capt. Lacombe, was fitted by her owners, Messrs. Bergin & Fournier, for a sealing cruise, and left Quebec on the 14th March with a crew of 13 men, for the Gulf. They ran out of coal, and put into Aspey Bay for a supply. The trip was a complete failure, they having left too late in the season, and also missed the flocks.

The shore catch of seals on the Magdalen and Bryon Islands during the months of March and April was very successful. The sealing fleet got but average fares.

January.

As in the season of 1889, very little ice was reported in the river and upper portion of the Gulf until the month of January. A large quantity of snow fell; the thermometer ranging frequently below zero caused the ice to form fast; with the exception of the Gulf stations, heavy, open to close-packed ice was reported, and not until the 20th of January was any ice seen off Anticosti, Magdalen Islands, Meat Cove and Cape Ray stations. The entrance to the Sagunenay River, with the exception of a few days, remained free of ice.

During the first week there was a very heavy fall of snow. Fame Point, on the Gaspé coast, reported 34 inches on the level; strong west to north-west winds prevailed. The lowest register of the thermometer for the week was 3° above zero.

The second week was clear, with strong west to north-west winds. Father Point reported the thermometer 22° below zero on the 17th instant; Manicouagan, 30° below zero on the 15th, and 45° below on the 17th instant. The same day the record for the same date on the Magdalen Islands was only 10° below.

The ice on the Manicouagan Shoals was covered all week with seals.

The third week was mild, with exception of one day, when thermometer reached 22° below zero at Father Point; east-north-east wind; no ice reported on north shore.

For the last week snow was reported from several stations with variable winds, north-north-west to south and south-west. Light, open ice reported from all Gulf stations.

Seals in thousands reported on Manicouagan Shoals.

February.

During the first and second weeks considerable snow fell. West to north and south-west winds, and thermometer occasionally below zero, helped to increase the ice, which was reported as being heavy, close-packed, from nearly all stations. Seals still reported numerous at Manicouagan and Point des Monts. A few were killed at the latter place.

The latter part of the month was free from snow; weather mild; west winds prevailed; heavy, close-packed ice reported from all stations.

March.

The first week showed a change, both in wind and weather; rain fell in places, with wind from east and north-east. Father Point reported "no ice" all week. Ice remained the same. Seals in thousands off Manicouagan and Point des Monts. None seen from Anticosti, Meat Cove or Cape Ray.

The second week was cloudy, with considerable snowfalls in the upper part of the River and Gulf, and rain at Anticosti and Cape Ray; heavy, close-packed ice everywhere.

The third week west winds prevailed on the south shore of the St. Lawrence, while east-north-east winds, with heavy snowfalls, occurred on the north shore. No ice off

Father Point and Tadoussac, and the Manicouagan Shoals entirely clear of ice. Seals in large flocks off Point des Monts. A few seals killed at Cape Ray and the Magdalen Islands; none seen at Anticosti.

Snow fell the latter part of month; west and north-west winds in the upper part of River, and heavy east and south winds in the Gulf, interspersed with dense fog and calm; heavy, open-ice off all stations in the Gulf. No ice at Rivière du Loup, Father Point and Tadoussac. The steamer "Panther," from St. Johns, Nfld., signalled Cape Ray on the 27th inst: "Have (4,000) four thousand seals." The fishing at Cape Ray very poor. Eleven schooners were in the ice off that station on the 27th instant.

April.

The upper part of the river remained partly clear of ice for balance of the season, but the Gulf stations reported heavy open and field ice in large quantities. Magdalen Islands reported an immense field of close-packed ice, about fifteen miles wide, to the south of Amherst Island.

Meat Cove, on the 29th April, reported a strip of field ice passing there estimated at ten miles wide. East and south-east winds prevailed during the latter part of the month.

Anticosti.—The 18th of April last day ice seen off this Island.

Magdalen Islands.—The 25th of April last day ice reported off there.

Cape Ray.—Ice reported for the last time from this station on the 30th of April. Two schooners were crushed by the ice and sunk near Cape Ray on the 2nd April. Crews saved and landed at Channel. Names of vessels not ascertained.

Straits of Belle Isle.

The first steamer to pass through the Straits was the "Gerona," Capt. Sangster, who passed on Monday, the 16th June. The captain made no report of his experience with ice.

The second steamer to pass through was the SS. "Toronto," Capt. McAuley, of the Dominion Line, from Liverpool, 21st June, *via* Belfast, and arrived in port Quebec, Wednesday, 2nd July. Reports: Had fresh to strong N.W. to S.W. winds and considerable rain to Lat. 53 N., Long. 47 W. Was detained hours in fog. From twenty-five miles east of Belle Isle passed a large number of icebergs, some of which were very large, and from Belle Isle to abreast of Greenly Island passed innumerable large icebergs and detached pieces of ice. Passed one medium-sized berg seventy-eight miles S. 50° W. of Greenly. Also, two others one hundred and six miles S. 50° W. of Greenly.

This same captain reports bergs still in the Straits and south of Greenly, when his vessel passed there on 6th September.

Icebergs were met with in the Straits by all vessels passing there this season, up to the end of October.

Innumerable bergs were met with east of the Grand Banks, and for eighty miles south of Cape Race, by vessels coming south of Newfoundland.

Navigation Open.

Two schooners arrived up on the 6th April from below with produce.

The schooners "Ste. Marie," for Esquimaux Point, and "Marie Amelie," for Bonne Espérance, left 16th April laden with general produce.

April 17.—Telegram from Three Rivers to the press here reported Lake St. Peter clear of ice.

A pilot schooner, with ten pilots, left this date for their stations below.

April 19.—River clear of ice at Three Rivers, seven days later than in 1889.

April 21.—The "Manicouagan" and "Red Island" lightships proceeded for their respective stations, the former in tow of SS. "Napoleon third," and the latter under sail from Indian Cove.

April 22.—The Lower Traverse lightship left for her station under sail from Indian Cove.

April 26.—The balance of the ice jammed at Cap Rouge passed out. Navigation is now open to Montreal.

April 30.—The SS. "Miramichi" left for Gaspé and way ports.

May 3.—SS. "Polino" left port for Cape Breton ports and St. John, Nfld.

April 29.—The steamer "Three Rivers," of the R. and O. Company, arrived from Montreal, being the first of the season, five days later than in 1889.

Transatlantic Vessels—First Arrival from Sea.

The Royal Mail SS. "Sardinian," Capt. Wm. Richardson, of the Allan Line, reported off Cape Ray on the 26th April, arrived in port at 2.35 April 29th. Reports having met considerable ice in the Gulf, west of Cape Ray, and steamed through 16 miles of it.

Last season the SS. "Lake Nepigon" arrived in port at 3.45 a.m. 21st April, and in 1888 the SS. "Vancouver" arrived in port on the 29th April.

The SS. "Oregon," of the Dominion Line, and the SS. "Lake Nepigon," of the Beaver Line, arrived in port on the same day, 29th April. The "Lake Nepigon" was the first vessel, passing inwards off Cape Ray at 4.30 p.m. 21st instant. She met ice, and was detained in it.

The First Sailing Vessel from Sea.

The Norwegian bark "Magdaline," Capt. Jansen, from Buenos Ayres, in ballast, arrived in port at 5 p.m. 8th May. The captain reports: Sailed through large fields of ice in the Gulf and sighted some icebergs.

The first sailing vessel to arrive here in 1889 was the bark "Howard," from London, which reached this port at 6 a.m. 30th April.

Last Steamer Inwards.

The SS. "Newfoundland," from Halifax, with coals, arrived up on 28th November.

Last Steamer Outwards.

The SS. "Brazilian," Capt. Whyte, cleared for London on the 25th November.

Cable Removed.

The Dominion Government cable, connecting Bird Rock with Grosse Isle, Magdalen Islands, was removed, and relaid between St. Pauls Island and the main shore line on Cape Breton Island, near Cape North.

New Signal Station.

For the season of 1891 vessels coming into the Gulf of St. Lawrence for Lower Province ports, Quebec and Montreal, will be able to signal from St. Paul's Island. This will prove to be a valuable addition to the service.

Respectfully submitted,

H. J. McHUGH,

Inspector Signal Service.

QUEBEC, 28th November, 1890.

APPENDIX "A."

REPORT ON THE ICE IN THE STRAITS OF BELLE ISLE, AS NOTED BY THE AGENTS AT CAPE BAULD, NFLD., BELLE ISLE, GREENLEY ISLAND, CAPE NORMAN AND POINT RICH, NFLD., FROM DECEMBER, 1889, TO SEPTEMBER, 1890.

Cape Bauld.

December 5, 1889.—First appearance of ice; snow fell on the 3rd, 26th and 30th instant. Towards the end of the month a good deal of ice ran along shores.

December 5 to 13, 1890.—An average of three icebergs seen daily, and from the 28th to 31st two daily, far out, and moving to the south-east. West to north and south winds prevailed. Seals very scarce.

January 3, 7 and 10, 1890.—Snow fell; wind continued from west-north-west; balance of month pretty clear, with occasional days of haze. Heavy, open and close-packed ice in sight with, an average of two icebergs visible every day during the month. Cold very intense all month. A few seals killed with guns near shore.

February.—Straits covered with ice, same winds prevailing as in January; ice moving to east and south-east. Numerous seals to be seen in the lakes between the ice. Cold continued very severe this month. Very little snow fell this month. Bergs seen every day.

March.—West to north and south-west winds all month; heavy, close-packed ice off here, moving north-east and south-east. Bergs seen daily.

March 26.—Five schooners arrived at Quirpon after seals; four of them left on the 28th for the north shore, but had to return, owing to the ice; met some seals.

April.—Had snow during eight to ten days; ice remains the same; same winds prevailing, but immense fields of ice coming down from the north. From the 15th to the 30th an average of thirty-seven bergs seen daily, some of immense size. On the 1st instant three schooners crossed over to Belle Isle.

May.—Ice and wind same as in April; severe weather; an average of forty bergs seen daily; field ice very extensive. A schooner has been in Pigeon Harbour since the 21st April awaiting an opportunity to reach Beile Isle. She got there on the 11th instant.

May 21.—A small steam launch from Newfoundland called here, being unable to reach the Labrador coast. Whales are very plentiful, more so than in previous seasons.

June.—Straits clear of ice opposite here on the 6th instant.

Belle Isle.

1889—December 5.—First ice formed during the night—(slab ice); a good deal of snow fell during the month; N. N.-W. winds prevailed.

December 10.—One Iceberg off Quirpon; one off Red Bay, one to the eastward; the Straits filled up pretty rapidly with large level sheets of ice, drifting east and south-east.

January—Snow fell on the 3rd, 7th and 10th only; had clear cold weather all month; the thermometer reached 21° below zero, the lowest of the season; the Straits full of sheet and slab ice.

February 7.—A good deal of open water among the ice; clear water for 12 miles out from the island eastward; The coldest day this month was the 19th; thermometer 18° below zero.

March—Snow fell on the 3rd and 28th only. N. N.-W. and S. S.-W. winds prevailed; ice drifting out of the Straits on the 28th; clear water from Cape Bauld to Cape Norman half-way across; four schooners between those places.

March 28.—Two Icebergs to the eastward, one about two miles long.

March 31.—A heavy jam of large northern ice drifted out to east, also thirty-three icebergs, some of immense size.

April 1.—Three schooners sighted coming off from Quiryon; ice slack between here and Cape Bauld, but slab ice making fast in clear water.

April 3.—Schooners "Naomi," "Blooming Queen" and "Minnie Gray," of Green Bay, Nfld., anchored in cove. They report having seen no seals, and ice so heavy and making fast, had great difficulty in getting through it; the winter south of here was very cold and frosty and people along the French shore in destitute circumstances.

April 21.—A heavy jam of ice in all directions; Straits blocked with ice; no clear water to be seen; 200 icebergs to east and west, some the largest ever seen here; the most of them lie east south-east about 19 miles off.

April 30.—A heavy jam of ice south-east of here; clear water 13 miles east from the island; 190 bergs in sight. The wind was mostly E. N.-E., E. S.-E., with a few days of west-wind. Had six days of snow.

May—A few snow flurries, rain and sleet; wind S. S.-E. and E. N.-E. most of the month; ice remained heavy jammed to the W. and N.-W.

May 1.—Schooner "British Lion" trying to make Lark Harbour to land fishing crew; this she succeeded in doing on the 11th instant. Reports left Change Islands (150 miles distant) 17th April, and been ever since trying to make this island; met heavy ice and numerous bergs to the south.

May 15.—Ice tightly packed; Straits closed west-north-west from here, from south to north shore.

May 17.—No ice to the east; a good deal to the south and west; sixty bergs in sight.

May 22.—A heavy pack of ice from White Islands, reaching across to Henley Harbour. Steam launch "Dart" bound west.

The last day of the month ice came out from the north, and to the east of the Island.

June 2.—Strong north-east breeze; hazy and foggy; 4 p.m. SS. "Nimrod" bound west, and 8 p.m. SS. "Neptune" arrived to land fishing crews. Both reported very little ice south of here.

June 2 to 13.—E. N.-E. gales, with rain and fog, prevailed.

June 14.—Clear N.N.-E.; ice along the Labrador coast drifting fast up the straits. Schooner "Beulah," bound to Lark Harbour. Frigate from west bound south.

June 16.—SS. "Fremona" inwards at 6.30 a.m.. Appeared to get through, as far as could be seen.

June 18.—Clear light W.N.-W. winds; ten schooners in sight. Inwards 10 p.m. SS. "Vancouver." She lay to at 11 p.m. off the edge of the ice off Cape Norman; 109 icebergs in sight.

June 19.—SS. "Vancouver" proceeded at daylight.

June 20.—Heavy snowfall, and hazy; strong N.E. wind. Steamer "Dart" arrived with salt from Blanc Sablon for fishing station. Reports seeing the steamers passing slowly through the ice yesterday. SS. "Nimrod," which passed here on the 2nd instant, was disabled the same night, having broken off her propeller and shaft crank pin; otherwise badly damaged; was met next morning and taken in tow by SS. "Neptune," brought to Wolf Harbour, and thence to St. John. She also reported a schooner lost off Forteau, crew saved. The vessel was said to be from Quebec.

June 26.—Clear, calm and fine. Some ice along shore from Cape Norman to 10 miles east of Cape Bauld.

June 27.—Fresh gale from east, with rain. SS. "Waldensian" in at 9 a.m. No ice in sight.

July 1.—A heavy jam of ice along the north shore, reaching half way across to the Island, drifting up fast.

July 2.—Ice up to near Red Bay. Steam launch and fifty schooners bound north; most of them returned to Quirpon.

July 5.—Light wind; ice scattered to east, west and south; four steamers inward, one Allan Line outward at 9 p.m., and SS. "Vancouver" outward, going slow in the ice close Quiryon.

July 8.—A good deal of ice east, scattered to west and south.

July 11.—No ice in the Straits. A little scattered to the south-east.

Greenly Island.

No reports from this station until March. Weather wind, and ice, from that up to June, similar to Belle Isle. But few icebergs seen at a time, but every day in May, June and July, and on 9th August eighteen large, and on the 10th ten bergs were seen. Detached pieces were seen in September.

Cape Norman.

1889.—December 4th.—First light slab ice formed to-day.

1890.—January to July.—Very little change in weather, wind or ice from that reported by Belle Isle, with exception of bergs, which were seen in great numbers off there until the 18th July—1 the 1st instant, 98 the 2nd, 127 the 3rd and 45 the 5th.

July 5 86; 11th 84, 12th, 62; 17th, 33; 18th, 26. None seen after that date.

Point Rich.

1889.—December 12.—First ice seen off this station. Very little, and that light ice seen from that date until the 5th January, when cold weather set in and the ice ran heavy and close-packed; west and north-west winds prevailed, and a good deal of snow fell. No bergs were seen off here until the 20th and 21st of April, when ten were seen, and none after that date.

May 21.—Three French brigs called with fishing crews.

June 26.—The last ice seen off here distant about 9 miles, moving eastward.

Bird Rocks, Magdalen Islands.

1890.—January 4.—First appearance of field ice grounded in shallow places and piled up from 20 to 30 feet out of water.

January 10.—Up to this date light close-packed and open ice seen, and after heavy close-packed ice appeared on all sides.

January 12.—Heavy shore ice all around the Rocks. Winds, west, south and north-west; weather cold.

February and March.—Similar condition of ice.

February 20.—First seals seen to the northward.

March 18.—Large flocks of old and young harp seals on the ice close to the Rocks. Three schooners were seen outside the ice to the westward of here; heavy close-packed ice on all sides as far as seen; seals remained thereon until the 16th April, when a heavy sea from the northward broke all the shore ice and it disappeared to the south as if driven by a cyclone.

Respectfully submitted,

H. J. McHUGH,

Inspector Signal Service.

QUEBEC, 28th November, 1890.

APPENDIX "B."

THERMOMETER Readings at Belle Isle from December, 1889, to March, 1890.

DECEMBER, 1889.				JANUARY, 1890.				FEBRUARY, 1890.				MARCH, 1890.			
Date.	8 a.m.	4 p.m.	9 p.m.	Date.	8 a.m.	4 p.m.	9 p.m.	Date.	8 a.m.	4 p.m.	9 p.m.	Date.	8 a.m.	4 p.m.	9 p.m.
1	°	°	°	1	°	°	°	1	°	°	°	1	°	°	°
2	18	16	15	2	- 6	- 8	- 7	2	10	12	4	2	32	36	34
3	10	12	5	3	2	6	5	3	- 9	- 4	- 2	3	36	37	34
4	- 1	3	0	4	6	3	0	4	8	19	22	4	33	36	34
5	- 5	0	1	5	- 21	- 18	- 15	5	20	15	10	5	32	28	24
6	- 9	- 4	2	6	- 15	- 10	- 10	6	15	23	20	6	23	26	24
7	20	22	21	7	- 10	- 4	0	7	24	10	0	7	23	26	22
8	27	29	20	8	17	6	0	8	- 10	- 8	- 9	8	24	26	20
9	7	12	9	9	- 15	- 10	- 8	9	- 5	1	6	9	16	14	8
10	16	20	29	10	- 3	2	5	10	6	- 6	- 7	10	- 9	- 4	- 2
11	36	34	20	11	- 1	- 3	- 4	11	- 16	- 9	- 8	11	- 5	4	1
12	8	14	14	12	- 7	- 14	- 15	12	- 7	- 4	- 2	12	- 5	2	- 2
13	17	19	22	13	- 16	- 10	- 8	13	- 10	- 6	2	13	- 1	4	6
14	20	8	4	14	- 5	0	14	14	10	22	7	14	0	3	0
15	- 10	- 8	- 12	15	20	0	- 6	15	- 6	3	10	15	2	6	4
16	- 16	- 12	- 10	16	- 12	- 13	- 9	16	24	32	37	16	0	5	6
17	- 10	- 8	6	17	- 7	- 8	- 10	17	26	20	7	17	6	12	16
18	10	5	0	18	- 10	- 12	- 12	18	- 2	3	- 6	18	22	24	19
19	- 1	7	9	19	- 17	- 13	- 13	19	- 10	- 6	- 8	19	16	13	14
20	13	19	20	20	- 10	- 10	- 9	20	- 18	- 13	- 14	20	10	14	9
21	22	21	24	21	- 10	- 5	- 7	21	- 10	- 6	- 4	21	10	13	9
22	22	26	20	22	- 8	- 3	- 5	22	6	10	5	22	6	12	8
23	10	8	6	23	- 7	- 5	- 6	23	- 5	3	- 2	23	16	13	8
24	5	6	3	24	- 8	- 7	- 6	24	- 2	0	- 1	24	6	10	7
25	3	6	6	25	- 6	- 5	- 7	25	0	10	9	25	9	8	6
26	10	14	12	26	- 7	- 3	- 1	26	12	14	10	26	6	10	8
27	16	12	10	27	14	10	0	27	17	23	24	27	6	12	10
28	15	22	20	28	- 1	0	- 2	28	28	31	32	28	19	22	28
29	10	12	8	29	- 9	- 9	- 10	29	30	33	32	29	26	28	19
30	16	20	12	30	- 10	- 9	- 18	30	...	...	...	30	19	20	17
31	17	19	10	31	- 20	- 18	- 16	31	...	...	...	31	16	18	15
31	4	6	3	31	- 14	- 6	- 1	...	...	...	...	...	5	10	7
Lowest temperature— 15th, 8 a.m., -16°				Lowest temperature— 4th, 8 a.m., -21°				Lowest temperature— 19th, 8 a.m., -18°				Lowest temperature— 9th, 8 a.m., -9°			
Highest temperature— 10th, 8 a.m., 36°				Highest temperature— 14th, 8 a.m., 20°				Highest temperature— 15th, 9 p.m., 37°				Highest temperature— 2nd, 4 p.m., 37°			

The sign (-) before figures indicates below zero.

MICHAEL COLTON,
Light-keeper.

Respectfully submitted,
H. J. McHUGH,
Inspector, Signal Service.

QUEBEC, 23th November, 1890.

APPENDIX

BEING a Statement relative to the Life-boat Stations

Station.	Established.	Coxswain.	Number of Crew.	Salary of Coxswain.	Wages of Crew.	Value of Boat.
Blanche, N.S.....	Sept. —, 1889.	W. A. B. Smith.	6	\$75 p. annum and \$1.50 for each drill.	\$1.50 each drill, twice a month.	\$ 575
Cape Sable, N.S.		Light-keeper....	Noorganized crew.			
Cobourg, Ont.	Nov. 7, 1882..	D. Rooney.....	6	\$75 p. annum and \$1.50 for each drill.	\$1.50 each drill, twice a month.	575
Collingwood, Ont....	Sept. 2, 1885.	P. Doherty.....	6	do ..	do ..	575
Devil's Island, N.S. .	1885.	Fredk. Edward..	6	do ..	do ..	575
	Re-organized in 1890.					
Duncan's Cove, N.S.	1886.	R. E. Monk	6	\$75 p. annum and \$1.50 for each drill.	\$1.50 each drill twice a month.	575
Goderich, Ont.	Oct. 21, 1886.	Wm. Babb.....	6	do ..	do ..	575
Herring Cove, N.S. .		James Dempsey.	Noorganized crew.			
Mud Island, N.S.		Jacob Pitman...	do ..	\$80.....		
Pelé Island, Ont.		A. Henning	6	\$75 p. annum and \$1.50 for each drill.	\$1.50 each drill twice a month.	575
Pictou Island, N.S. .	Nov. 23, 1889.	D. McLean.....	6	do ..	do ..	575
Poplar Point, Ont. .	April 20, 1883.	L. Spafford....	6	do ..	do ..	550
Port Hope, Ont.	Nov. 6, 1889.	C. R. Nixon....	6	do ..	do ..	620
Port Mouton, N.S. .	Nov. —, 1889.	J. Maxwell.....	6	do ..	do ..	575
Port Rowan, Ont....	Oct. 19, 1883.	J. W. McCall...	6	do ..	do ..	.....
Port Stanley, Ont. .	June 25, 1885.	Wm. Berry.....	6	\$75 p. annum and \$1.50 for each drill.	\$1.50 each drill, twice a month.	575

No. 7.

maintained by the Dominion Government in Canada.

Description of Boat.	Equipment.	Where Built.	Expenditure for Fiscal Year ended 30th June, 1890.	Services rendered during the Season of 1890.
			\$ cts.	
Self-righting and self-bailing, 25 feet over all, 8 feet beam, Dobbins' pattern.	Full equipment, as required in regulation boat-house.	Dartmouth, N.S.	683 42	
Metallic life-boat, 16 feet keel, 5 feet beam.	Ordinary outfit.			
Self-righting and self-bailing, 25 feet over all, 8 feet beam, Dibbins' pattern.	Full equipment, as required in regulation boat-house.	Goderich, Ont.	247 00	
do ..	do ..	do ..	227 75	
do ..	do ..	Dartmouth, N.S.		
do ..	do ..	do ..	130 00	
do ..	do ..	Goderich, Ont.	332 65	
Metallic life-boat, 28 feet keel, 6 feet beam.	Full equipment.....	New York..	41 00	The fishing boat "Parisian" was lost with her crew of three brothers on the 9th April, 1890, about 4 p.m. It was found impossible to go to their assistance with the life-boat, the wind driving 60 miles an hour. The life-boat's crew continued to patrol the beach until the night of the 10th, but all efforts were unavailing, and the three men perished. The life-boats crew experienced a hard time, the sea breaking on them and freezing their clothing, and in this condition, they were compelled to climb high clay banks, at intervals, before they could reach the next piece of beach.
Fishing boats and doreys (not Govt. property.)	.....	.....
Self-righting and self-bailing, 25 feet over all, 7 feet beam, Dobbins' pattern.	Full equipment, as required in regulation boat-house.	Goderich, Ont.	257 62	
do ..	do ..	Dartmouth, N.S.	426 15	
Self-righting and self-bailing, 26 feet over all, 7 feet beam, Dobbins' pattern.	do ..	Buffalo, U.S.	390 33	
do ..	do ..	Goderich, Ont.	553 75	
do ..	do ..	Dartmouth, N.S.	482 88	
Surf boat, 26 feet long, 6½ feet beam.	Full equipment and boat-house.	Buffalo, U.S.	248 00	On 14th December, 1889, went to assistance of schr. "Kelso" which was on fire and had driven to shore on Port Mouton Head and became a total wreck. The life-boat was on service and brought the crew of 4 men to the island.
Self-righting and self-bailing, 25 feet over all, 7 feet beam.	Full equipment and boat-house.	Goderich, Ont.	222 00	

STATEMENT relative to the Life-boat Stations

Station.	Established.	Coxswain.	Number of Crew.	Salary of Coxswain.	Wages of Crew.	Value of Boat.
Sable Island, N.S. . . .	1885.	Supt. Humane Establishment.	From staff of Humane Establishment.	Paid as superintendent and staff of Humane Establishment.		\$
Scatterie, N.S.	1885. Re-organized, 1890.	Jas. N. Brown..	6	\$75 per ann. and \$1.50 for each drill.	\$1.50 each drill, twice a month.	
Seal Island, N.S. . . .	1880.	Light-keeper. . . .	No organized crew.			
St. Paul's Island, N.S.		Supt. Humane Establishment.	do			
Toronto, Ont.	March 1, 1883.	Wm. Ward.	6	\$75 per ann. and \$1.50 for each drill.	\$1.50 each drill, twice a month.	575
Wellington, Ont. . . .	Mar. 17, 1883.	H. McCullough.	6	do	do	1,400
Whitehead, N.S. . . .	June 6, 1890.	H. P. Munroe . .	6	do	do	575
Yarmouth, N.S.	1886. Re-organized, 1889.	R. Carroll.	6	do	do	575

Besides above mentioned Life-boats, Life-

Father Point.	1875.	E. Chamard.		\$5 per annum.		128
Isle aux Grues.	1875.	J. Painchaud.		do		128
Kamouraska.	1875.	R. Leblanc		do		128
L'Islet.	1875.	J. B. Dussault.		do		128
Murray Bay.	1875.	Achille Gagné		do		128
Rivière du Loup. . . .	1882.	D. Raymond.		do		128
*Rivière Ouelle. . . .	1886.	G. Mercier.		do		128
Ste. Anne.	1875.	P. Lafrance.		do		128
St. Jean Port Juli. . .	1875.	L. D. Babin.		do		128
Trois Pistoles.	1885.	D. Damour.		do		128

*This canoe was first stationed in 1875, but was removed to Rivière du Loup in 1882, it being considered more serviceable at the latter place. In 1886 a new canoe was built and stationed at this place.

maintained by the Dominion Government in Canada—*Concluded.*

Description of Boat.	Equipment.	Where Built.	Expenditure for Fiscal Year ended 30th June, 1890.	Services rendered during the Season of 1890.
			\$ cts.	
Two boats as described above, Dobbins' pattern ; one ordinary life-boat fitted with air-tight compartments ; one metallic life-boat ; one surf boat, and one large despatch boat, schooner rigged, equipped for sea going.	Boat-houses, full equipment, &c.			The rocket apparatus was used on the evening of 27th August, 1890, and connection made with the wreck of the barque "Gerda," of Dranmen, Norway, which had struck during a dense fog and strong S. W. breeze, but owing to the fog and darkness did not succeed in getting the hawser set up, so as to be used. Two men were rescued from the surf while trying to swim ashore. The surf slightly subsiding at daylight, the Francis metallic life-boat was used. The captain and 7 men were hauled on board the boat through the sea with a heaving line, there being too much sea and wreckage for boat to go alongside.
Self-righting, &c., same as others, Dobbins' pattern, and clinker built ships' life-boat, 21 feet keel.	Full equipment and boat-house.	Dartmouth, N.S.		
Wooden life-boat, 25 feet long, 6 feet beam, fitted with air-tight compartments.	do	Halifax, N.S.		
Two surf boats, one 25 ft. over all, 6½ ft. beam, the other 23 ft. long, 4 ft. 8 in. beam.		do		
Self-righting &c., same as others, Dobbins' pattern.	Full equipment and boat-house.	Goderich, Ont.	222 00	
do	do	Buffalo, U.S.	755 31	Saved on 2nd December, 1890, the crew of the wrecked schr. "Sunbeam."
do	do	Dartmouth, N.S.	427 26	
do	do	do	14 49	

canoes are stationed in Province of Quebec, as under.

	12 paddles, 2 boat-hooks, painter and boat-house.	Quebec	
	do	do	
	do	do	
	do	do	
	do	do	
	do	do	
	do	do	
	do	do	
	do	do	

APPENDIX No. 8.

BEING a Statement relating to the Wharves under the control of the Department.

Locality.	Wharfinger.	Date when Rules established for the Government of all Wharves.	Date of Appointment of Wharfinger.	Remuneration Allowed.
<i>Ontario.</i>				
Cockburn Island.....	Alfred Monck	12th June, 1889	May 30, 1889.	25 p.c. of collections.
Goderich.....	T. N. Dancy		Nov. 30, 1888.	\$300 per annum do
Inverhuron.....	Vacant			25 p.c. of collections.
Kingsville.....	S. A. King.....		May 5, 1890.	25 do
Rondeau.....	W. R. Fellowes.....		Dec. 17, 1888.	25 do
Sault Ste. Marie.....	W. H. Plummer.....		Jan. 2, 1890.	\$100 per annum do
Southampton.....	James Johns.....		Sept. 12, 1890.	25 p.c. of collections.
Summerstown.....	Frank Laplante.....		July 18, 1890.	25 do
<i>Quebec.</i>				
Anse St. Jean.....	Vacant.....			
Baie St. Paul.....	do.....			
Berthier.....	Chas. Bouffard..		Mar. 24, 1890.	25 do
Carleton.....	Jos. Cauchon.....		June 4, 1889.	\$50 per annum do
Cascades.....	Louis Leroux.....		do 30, 1887.	25 p.c. of collections.
Chicoutimi.....	Vacant.....			
Isle aux Grues.....	Jos. Painchaud.....		Feb. 17, 1890.	25 do
Iacolle.....	B. V. Naylor.....		July 2, 1886.	25 do
Les Eboulements.....	Vacant.....			
L'Islet.....	Prosper Ploude.....		Feb. 17, 1890.	25 do
Murray Bay.....	Vacant.....			
New Carlisle.....	John C. Hall.....		June 4, 1889.	25 do
Port Daniel.....	John Enright.....		Sept. 11, 1890.	\$50 per annum do
Pointe aux Orignaux.....	Vacant.....			
Rivière Ouelle.....	do.....			
Rivière du Loup.....	do.....			
St. Alphonse de Bagotville.....	do.....			
St. Jean d'Orléans.....	do.....			
St. Laurent d'Orléans.....	do.....			
Tadousac.....	do.....			
<i>Nova Scotia.</i>				
Arisaig.....	Donald Ross.....		Aug. 25, 1888.	25 p.c. of collections.
Avonport.....	Robert Shaw.....		Nov. 23, 1888.	25 do
Bayfield.....	Edward Randall.....		Aug. 25, 1888.	25 do
Belliveau's Cove.....	Ambrose Thérieau.....		do 25, 1888.	25 do
Brooklyn.....	F. T. Gardiner.....		Oct. 20, 1882.	20 do
Canada Creek.....	C. E. Eaton.....		Nov. 23, 1888.	25 do
Cape Cove.....	Jacob Deveau.....		Aug. 2, 1889.	25 do
Centreville.....	W. M. B. Dakin.....		Aug. 25, 1888.	25 do
Chipman's Brook.....	Jas. Misaner.....		Nov. 23, 1888.	25 do
Church Point.....	Fred. Bellevau.....		Sept. 15, 1888.	25 do
Cow Bay.....	Arch. McKinnon.....		April 15, 1879.	7½ do
Cranberry Head.....	Abram Thurston.....		Feb. 16, 1889.	25 do
Delap's Cove.....	W. R. McCaul.....		Nov. 28, 1889.	25 do
Digby.....	Wm. Watt.....		June 25, 1879.	20 do
Eagle Head.....	Nathan Leslie.....		Jan. 9, 1889.	25 do

STATEMENT relating to the Wharves, &c.—*Concluded.*

Locality.	Wharfinger.	Date when Rules established for the Government of all Wharves.	Date of Appointment of Wharfinger.	Remuneration Allowed.
<i>Nova Scotia—Concluded.</i>				
East Bay	Donald McInnis (Ronald's son)	12th June, 1889	April 5, 1886.	50 p.c. of collections.
East River, Sheet Harbour.	Malcolm McFarlane		May 20, 1890.	25 do
Grand Narrows, Victoria Co.	John P. McNeill		Aug. 25, 1888.	25 do
Grand Narrows, Cape Breton Co.	E. A. McNeill		Nov. 6, 1888.	25 do
Hall's Harbour	Sydney Roscoe		do 23, 1888.	25 do
Hampton	Judson Foster		Aug. 25, 1888.	25 do
Harbourville	C. O. Cook		Nov. 23, 1888.	25 do
Maitland, Hants Co.	C. S. Stuart		Sept. 5, 1888.	25 do
do Yarmouth Co.	J. W. Raymond		April 14, 1890.	25 do
Margaretsville	T. J. Downie		Aug. 25, 1888.	25 do
Meteghan Cove	H. T. Deveau		Sept. 15, 1888.	25 do
Meteghan River	Urbain Doucette		Jan. 3, 1883.	20 do
Militia Point	Alex. McFayden		Mar. 21, 1889.	25 do
Morden	Wm. Minnis		Nov. 23, 1888.	25 do
Oak Point	T. E. Bigelow		June, 3, 1876.	33½ do
Ogilvie	R. S. Armstrong		Nov. 23, 1888.	25 do
Parrsboro'	Thompson Tipping		do 26, 1888.	25 do
Pickett's Wharf	Andrew Bishop		Dec. 24, 1884.	25 do
Plympton	Wm. Smith		Aug. 8, 1890.	25 do
Point Brulé	David Stevenson		Nov. 23, 1888.	25 do
Port George	Jas. E. Slocomb		Aug. 8, 1890.	25 do
Port Greville	Vacant			25 do
Port Hood	Alex. McDougald		July 21, 1890.	25 do
Port Lorne	Samuel Beardsley		Aug. 25, 1888.	25 do
Salmon River	Thomas Foley		do 25, 1888.	25 do
Saulniersville	John T. Saulnier		do 25, 1888.	25 do
Tracadie	J. M. Hall		Nov. 6, 1888.	25 do
Tusket Wedge	Jas. Cothreau		Feb. 16, 1889.	25 do
Victoria	William Brown		do 11, 1889.	25 do
West Pubnico	N. A. D'Entremont		April 9, 1890.	25 do
West River, Sheet Harbour	Malcolm McFarlane		Sept. 3, 1889.	25 do
White Point	Elisha West		Jan. 9, 1889.	25 do
<i>New Brunswick.</i>				
Buctouche	Angus Renaud		July 7, 1887.	25 do
Clifton	Vacant			25 do
Hopewell Cape	Wm. Hamilton		April 9, 1890.	25 do
St. Louis	M. Barriault		do 11, 1890.	25 do
<i>Prince Edward Island.</i>				
Annandale	James Taylor		July 2, 1885.	25 do
Bay View	Joseph Harrington		Oct. 2, 1885.	25 do
Belfast	Thos. McLennan		July 21, 1890.	25 do
Brush Wharf	Levi R. Ings		Sept. 18, 1885.	25 do
Campbell's Cove	Angus McIntyre		Oct. 17, 1888.	25 do
Chapel Point	Ronald McCormack		Sept. 18, 1885.	25 do
China Point	W. S. N. Crane		do 18, 1885.	25 do
Clifton	Wm. McKay		do 22, 1886.	25 do
Crapaud and Victoria Pier.	James Day		May 12, 1890.	25 do
Georgetown	James Bourke		July 2, 1885.	25 do
Hickey's Wharf	Jas. J. Macdonald		Oct. 15, 1889.	25 do
Hurd's Point	R. Robblee		do 6, 1888.	25 do
Kier's Shore	H. S. McNutt		Nov. 3, 1885.	25 do
Lambert	Peter Keith		May 5, 1890.	25 do
Lewis Point	James E. Macdonald		July 2, 1885.	25 do
Mink River	Edward Henderson		do 2, 1885.	25 do

STATEMENT relating to the Wharves—*Concluded.*

Locality.	Wharfinger.	Date when Rules established for the Government of all Wharves.	Date of Appointment of Wharfinger.	Remuneration Allowed.
<i>P. E. Island—Concluded.</i>				
Murray Harbour, South...	Wm. Sharam.....	12th June, 1889	do 11, 1889.	25 p. c. of collection.
Nine Mile Creek.....	Edward Harrington.....		Oct. 29, 1885.	25 do
North Cardigan.....	Donald McIntyre.....		July 2, 1885.	25 do
Pinette.....	Hector D. Morrison.....		Sept. 18, 1885.	25 do
Pownal.....	Alex. McRae.....		Oct. 2, 1885.	25 do
St. Mary's Bay.....	C. H. Lewellin.....		July 2, 1885.	25 do
Souris.....	B. McEachern.....		June 3, 1884.	25 do
South Rustico, Oyster Bed				do
Bridge.....	Joseph Doucette.....		Oct. 2, 1885.	25
Stevens and Montague....	Peter Keith.....		May 5, 1890.	25 do
Sturgeon River.....	Bernard Kearney.....		Sept. 18, 1885.	25 do
Tignish River.....	Benjamin Gaudet.....		do 5, 1888.	25 do
Vernon River.....	J. G. McKenzie.....		Oct. 19, 1885.	25 do
Wood Island.....	Malcolm H. McMillan.....		May 16, 1889.	25 do

WM. SMITH,

Deputy Minister of Marine.

APPENDIX No. 9.

STATEMENT of Revenue derived from Wharves, Harbours and Piers paid to credit of Receiver General, for the fiscal year ended 30th June, 1890.

<i>Ontario.</i>		<i>Nova Scotia—Concluded.</i>	
	\$ cts.		\$ cts.
Collingwood	5 50	Brought forward.....	4,283 31
Goderich, rents.....	2,030 00	Port Greville.....	Nil.
Kingsville	241 25	Port Hood.....	80 59
Morpeth.....	8 13	Port Lorne.....	54 38
Rondeau.....	Nil.	Salmon River.....	Nil.
Sault Ste. Marie	Nil.	Saulniersville	29 42
	2,284 88	Tracadie.....	Nil.
<i>Quebec.</i>		Tusket Wedge.....	Nil.
Berthier.....	Nil.	Victoria Pier, King's County	20 71
Carleton.....	110 08	do Sydney, C. B.....	34 50
Cascades.....	Nil.	West River, Sheet Harbour.....	Nil.
Isle aux Grues	Nil.	West Pubnico.....	Nil.
Lacolle.....	18 00	White Point.....	Nil.
L'Islet.....	Nil.		4,502 91
New Carlisle.....	217 65	<i>New Brunswick.</i>	
Port Daniel.....	90 57	Buctouche.....	Nil.
St. John's.....	277 50	Chatham.....	112 50
	713 80	Hopewell Cape.....	34 50
<i>Nova Scotia.</i>		St. Louis.....	Nil.
Arisaig.....	Nil.		147 00
Avonport.....	Nil.	<i>Prince Edward Island.</i>	
Bayfield.....	113 21	Annandale.....	97 90
Belliveau's Cove.....	Nil.	Bay View.....	30 63
Brooklyn.....	Nil.	Belfast.....	91 84
Canada Creek.....	20 00	Brush Wharf.....	161 29
Cape Canso.....	3 50	Campbell's Cove.....	Nil.
Cape St. Mary's (Cape Cove).....	20 42	Chapel Point.....	24 00
Centreville.....	24 03	China Point.....	Nil.
Church Point.....	61 15	Clifton, New London.....	19 00
Chipman's Brook.....	22 68	Crapaud.....	Nil.
Cow Bay.....	1,804 20	Georgetown.....	55 82
Cranberry Head.....	Nil.	Hurd's Point.....	50 67
Delap's Cove.....	Nil.	Kier's Shore.....	33 26
Digby.....	1,005 24	Lambert.....	Nil.
East Bay.....	Nil.	Lewis Point.....	109 50
East River, Sheet Harbour	Nil.	Mink River.....	Nil.
Hall's Harbour.....	Nil.	Montague.....	130 55
Hampton.....	20 25	Murray Harbour.....	7 00
Hantsport.....	19 00	Newport.....	29 55
Harbourville.....	53 86	Nine Mile Creek.....	Nil.
Iona, Grand Narrows.....	347 31	Pinette.....	Nil.
King's Port, Oak Point.....	136 02	Pownal.....	62 37
Maitland, Hants County	107 44	St. Mary's Bay.....	Nil.
do Yarmouth County.....	26 33	Souris.....	Nil.
Margaretsville.....	199 82	South Rustico, Oyster Bed Bridge.....	58 62
Meteghan Cove.....	122 45	Sturgeon.....	36 87
do River.....	68 44	Tignish.....	Nil.
Militia Point.....	Nil.	Vernon River.....	117 28
Morden.....	46 35	Wood Island.....	4 05
Ogilvie.....	15 40		1,120 20
Parrsboro'.....	33 58	<i>British Columbia.</i>	
Pickett's Wharf.....	Nil.	Burrard Inlet.....	29 00
Plympton.....	12 63		
Point Brulé.....	Nil.		
Port George.....	Nil.		
Carried forward.....	4,283 31		

STATEMENT of Revenue derived from Wharves, Harbours, Piers, &c.—*Continued.*

RECAPITULATION.

Ontario.....	2,284 88
Quebec	713 80
Nova Scotia.....	4,502 91
New Brunswick.....	147 00
Prince Edward Island..	1,120 20
British Columbia.....	29 00
	<hr/>
	8,797 79

WM. SMITH,
Deputy Minister of Marine.

F. GOURDEAU,
Accountant.

APPENDIX No. 10.

STATEMENT of Sick Mariners' Dues Collected for the Fiscal Year ended 30th June, 1890.

<i>Quebec.</i>	\$ cts.	<i>Nova Scotia—Concluded.</i>	\$ cts.
Gaspé	47 68	Brought forward	892 90
Magdalen Islands	15 94	Bridgetown	2 44
Montreal	4,154 66	Digby	273 60
New Carlisle	256 02	Guysboro'	102 20
Percé	125 14	Halifax	7,995 20
Quebec	9,284 50	Kentville	15 56
Rimouski	181 22	Liverpool	81 44
St. Armand	44 23	Lockeport	66 90
St. John's	1,176 60	Lunenburg	367 54
Sorel	71 68	Margaretsville	7 10
Stanstead	23 62	North Sydney	1,196 96
Three Rivers	214 50	Parrsboro'	899 46
Total	15,595 79	Pictou	423 68
<i>New Brunswick.</i>		Port Hawkesbury	75 86
Bathurst	351 88	Port Hood	0 78
Chatham	1,509 48	Port Medway	51 98
Dalhousie	515 62	Shelburne	81 38
Dorchester	6 74	Sydney	2,820 70
Moncton	663 94	Truro	8 06
Newcastle	767 86	Weymouth	167 12
Richibucto	412 90	Windsor	1,069 48
Sackville	403 74	Yarmouth	349 48
St. Andrew's	207 68	Total	16,949 82
St. John	5,135 76	<i>British Columbia.</i>	
St. Stephen	96 90	Nanaimo	2,432 50
Total	10,072 50	New Westminster	38 18
<i>Nova Scotia.</i>		Vancouver	1,069 12
Amherst	519 04	Victoria	1,256 48
Annapolis	190 42	Total	4,796 28
Antigonish	11 76	<i>Prince Edward Island.</i>	
Arichat	123 88	Charlottetown	424 12
Baddeck	37 54	Summerside	43 24
Barrington	10 26	Total	467 36
Carried forward	892 90		

RECAPITULATION.

Quebec	\$ 15,595 79
New Brunswick	10,072 50
Nova Scotia	16,949 82
British Columbia	4,796 28
Prince Edward Island	467 36
	\$ 47,881 75

F. GOURDEAU,
Accountant.

WM. SMITH,
Deputy Minister of Marine.

APPENDIX No. 11.

JOINT REPORT OF THE CHAIRMAN OF THE BOARD OF EXAMINERS OF MASTERS AND MATES, AND OF THE ENGINEER OF THE MARINE DEPARTMENT, UPON AIDS TO NAVIGATION IN THE GULF AND RIVER ST. LAWRENCE, AND IN HALIFAX HARBOUR.—1890.

GENERAL REPORT ON FOG-ALARM, LIGHTHOUSE, BUOY, BEACON AND STEAMSHIP SERVICES.

HALIFAX, 5th August, 1890.

The Deputy Minister of Marine,
Ottawa.

We have the honour to report that, having received from the Department of Marine the following instructions:—

MARINE DEPARTMENT, OTTAWA, 24th June, 1890.

“Memorandum.

“Mr. Anderson will proceed to Quebec and join the ‘Napoleon.’ He will, conjointly with Capt. Smith, who will also join the vessel from Halifax, examine into and report upon all matters relating to improvements to the aids to navigation in the Gulf of St. Lawrence and Strait of Belle-Isle.

“The following subjects are to receive their special attention, and all the departmental files in connection therewith, particularly and in detail the representations of those interested in shipping, are to be considered and treated of in the reports which they will make.

“The fog-alarm service.

“1st. The comparative merits of steam-whistles and horns, with experiments on the range of each, whenever practicable.

“2nd. The comparative merits of fog-guns with and without wads, and of the old and new powders.

“3rd. Experiments with socket distress signals and comparative tests against the typical fog-guns.

“4th. The necessity for the establishment of a fog-alarm at Brandy Pots.

“5th. The possibility of improving the Green Island fog-alarm.

“6th. The desirability of removing the fog-alarm from Point Ste. Anne to Cape Chatte.

“7th. The consideration as to whether the fog-horn lately abandoned at Etang du Nord should be established at any other point on the Magdalen Islands.

“8th. Whether the location of the Greenly Island fog-alarm could be improved.

“9th. What improvements can be made in the Belle Isle fog-alarm.

“10th. Where additional alarms are required and the best description to adopt in each case.

" The lighthouse service.

"1st. What improvements are required in existing stations, both as regards illuminating apparatus and buildings.

"2nd. What new lights are most required.

" Buoy and beacon service.

"To examine generally into the service as now conducted, and judge whether it requires enlargement or improvement. To report upon the plans and arrangements for laying buoys and attending to them in the gulf and river.

" Steamship service.

"To inquire into and report upon the service required of the 'Napoleon' and 'Druid' and whether the 'Druid' could be spared for the lakes, and arrangements made for the 'Napoleon' to attend to the Gulf, and if so, what should the arrangement be. Generally, to report on this part of the service, with such recommendations for its improvement as may occur to them.

" Halifax harbour approaches.

"To examine the lights and aids to navigation in approaching Halifax Harbour, and to report upon the improvements required there additional, mentioning each of them in the order of their necessity or urgency.

"To make as accurate estimates as possible of the probable cost of each improvement or work recommended."

we joined the "Napoleon" at Quebec on the 10th July last, and at 4 p.m. left on the proposed trip.

We have, as closely as possible, adhered to the instructions given us, but the fact that our contemplated examination of Halifax Harbour obliged us to leave the steamer at Pictou, only gave us the opportunity of examining the Gulf stations on the way down, and, consequently, we could not visit the channel north of Anticosti, nor all the lights on the Gaspé coast. Fog also prevented us from examining the north shore from Murr Island to Cape Whittle; but we think that in all other respects the work set us has been carried out. A diary of the trip is annexed, showing that the time occupied has been fully and profitably employed. (Appendix D.)

In addition to the work allotted to us, numerous observations of the surface temperature of the water, and of the magnetic variation of the compass were taken by Capt. W. H. Smith, which are annexed in tabular form. (Appendix E.)

We will now take up the points on which we were instructed to report in the order of the Deputy's memorandum.

1st. The comparative merits of steam-whistles and horns. The only two places at which a horn could be sounded against a whistle were at the South Point of Anticosti and at Forteau, Point Amour. At the former place the peculiar atmospheric conditions, which made both signals inaudible at a short distance, while they were audible at a much longer range, prevented a satisfactory comparison.

The tongue of the horn also broke during this experiment, of which we were unaware until the information was telegraphed us to the next station. At Forteau the whistle is located 700 yards to the westward of the horn, and as we proceeded down the coast, was speedily shut in by Point Amour, and, consequently, a fair comparison could not be made. Judging, however, by our own observations, and by the unanimous opinion of the sailors, fishermen, &c., whom we have been able to consult, whistles are more effective than horns, especially at long ranges and under unfavourable conditions of weather. When in the axis of the horn and at a moderate distance its sound is undoubtedly more penetrating than that of any whistle, but this advantage is quickly lost as we pass the axis either way, and, in certain conditions of the weather, the rapidly varying intensity of the horn's sound may be an absolute disadvantage. Other advantages of the whistle are the greater strength and simplicity of its parts and its better adaptability to a variation of the blast.

The mechanism of the horn makes single blasts almost, if not altogether, a necessity, with a variation in the length of the blast and interval as the only means of differentiation, whereas the whistle can be adapted to any combination of blasts and intervals.

The advantage of the horn over the whistle is, that it costs less to establish and maintain it (the machinery being not so expensive, and a considerably less amount of fuel and water being required to operate it). As, in many places where fog signals are located in the Gulf of St. Lawrence, the landing is difficult and dangerous, and fresh water is frequently scarce and the risk of freezing great, these are grave considerations.

We find that the difficulty of obtaining an adequate water supply has led to the faulty location of the fog-alarms at all the following stations: Point Amour, Greenly Island, Cape Ray (first location), Etang du Nord and Point Ste. Anne.

Annexed will be found a synopsis of all tests of steam fog-alarms made during this trip. (Appendix B.)

2nd. The use of wads in fog-guns.

The experiments which were made in having wadded charges fired from guns for comparison with unwadded charges, did not give any such decided superiority to the wadded charges as might have been expected, and although to the firers there was a much greater ring and reverberation from the wads, this effect did not seem to extend to the extreme limit of the range of the gun. The weight of evidence goes to show a slight increase in sound in some cases from the use of the wads, but not such as to justify their expense. It would probably be much more effective to put the price of the wads into extra powder.

Annexed will be found details of all experiments made with fog-guns. (Appendix C.)

2nd. The comparative merits of the several brands of powder.

The powder supplied in 1888 was a very fine grained, highly glazed article purchased through Messrs. Chinic & Co., from the Hamilton Powder Co. The supply of 1889 was obtained from the Militia Department, and consists of an old lot of R. F. G. powder, no longer used for war purposes, but utilized for salutes, &c. It proves to be an unglazed brown powder of irregular size, with a great deal of dust in it, some of it put up in large cartridges, and quite hard from caking. This powder has been condemned by every keeper using it, and certainly is not a first class article.

The supply of 1890 was obtained direct from the Hamilton Powder Company by the Department, and is a very coarse grained, clean, highly glazed powder.

Our tests showed the 1888 powder to be unquestionably and far superior to either of the others, and of the other two, the 1889 powder is, if anything, superior to that supplied this year. Mr. Gregory and some of the keepers expressed the opinion that the very large grain of the 1890 powder would produce combustion so slow that some part of the powder would leave the short 32 pr. carronades unconsumed, and the fact that wads seemed to improve the sound of this powder more than that of the other supplies, is an argument in favour of that theory. Whatever the reason, the result was not so good as the fine appearance of the powder led us to expect. We would suggest experiments with a finer grained and better milled powder for next year's supply, even at a considerably greater cost.

3rd. Experiments with socket distress signals.

The Cotton Powder Company's signals, as supplied to steamships, were tested against the guns at Belle Isle and alone at Chebucto Head. The results showed a decidedly stronger sound from the bombs at short distances and with the wind, but in other directions, and towards the limit of the sound of the signal, there was no advantage over the gun. These and similar bombs have, however, so much to recommend them, in the ease with which they can be fired, safety of carriage and decreased bulk of supplies, that we consider further investigation in this direction very desirable. The signals tried have in them besides the detonating charges, some white stars. These for fog signals are a useless adjunct, and doubtless if they were replaced by an extra amount of explosive material, the bombs would beat the guns at all distances.

We understand that bombs are used at Fastnet and Tuskar lighthouses, and suggest that enquiry be made of the Irish lighthouse authorities for details of their experience, description of bombs, their cost, &c.

The price charged for the signals now tried is so high as to stand in the way of their general adoption, being nearly twice the cost of a gun, shot for shot.

(4th.) The establishment of a fog-alarm at Brandy Pots.

(5th.) The improvement of Green Island fog-alarm.

These can best be considered together.

The Green Island fog-alarm seems to meet with the approval of many pilots and masters of vessels, and if left on the Island, we see no reason to change the position or character of the signal.

Vessels proceeding up the river can easily, and should pick up the sound of the whistle on Red Islet lightship, which is a very strong signal, and can be safely approached from seaward, being also free from any influence of difference of temperature, which is so often found to affect signals on shore.

For vessels going down the river, the gun is of most service, as after passing Brandy Pots, masters would prefer to keep well to the south of the Red Islet shoals.

If the Red Islet lightship were moored closer to the shoals, and more to the southward, she would be nearer to the channel, and a better lead through, especially to vessels outward bound, and this change would make the Green Island fog-gun of still less importance.

A fog-alarm of any kind at Brandy Pots, would, in our opinion be the means of leading vessels into difficulties rather than be a guide to them. The channel in this vicinity is narrow and surrounded by shoals, and heavy draught vessels cannot go through the Brandy Pots channel in dense fog with any degree of safety. Vessels are frequently compelled to anchor in and near the approaches to the channel and some have had narrow escapes in attempting to navigate it in fog. We are also afraid from the configuration of the land that a fog-alarm here would be subject to so many varieties of reflection and sound shadows from unequal heating of the atmosphere in patches, that its action could neither be foretold nor depended upon, and it would be extremely difficult to locate the sound, as we have found at other fog-alarm stations where there are outlying shoals.

If we take up the consideration of a general system of fog-signals for this vicinity, we think the existing one could be considerably improved. The Green Island gun, from being of secondary importance to the Red Islet whistle, and having its sound interrupted by the high reef to the north-east of it, might possibly be altogether abandoned without serious detriment to the interests of navigation. The fog-horn on Lark Islet, is of no use whatever for the general navigation of the St. Lawrence, and we question whether it is of any great utility in leading vessels to the Saguenay. The general principle is obvious that a fog-alarm should be so situated that a vessel can safely run close up to it. One of the prominent dangers in entering the Saguenay is Prince Shoal, which is distant $2\frac{3}{4}$ miles east south-east from the fog-alarm, and consequently we are at a loss to understand how the alarm can be safely used as a guide when entering the Saguenay.

We have referred to the difficulty of navigating the Brandy Pots channel in fog, and hitherto the pilots have shown a remarkable disinclination to use the fine clear channel north of Hare Island. Their objection appears to be the greater current both with ebb and flow and the difficulty of finding good anchorage. Masters of sea-going ships, however, have invariably preferred this channel, and we have found a disposition on the part of some of the pilots to come round to this view. If the fog-alarms above mentioned could be dispensed with, a light and fog-alarm station might profitably be established at the east and west ends of the north channel of Hare Island, one to mark the east end, either on the north-east extremity of Hare Island North Reef, or at the entrance of the Bay des Rochers, the other either on the south-west extremity of Hare Island South Reef, or on Cape Salmon. With a light on the first named of these places the gas buoy now marking the north end of Hare Island, could also probably be abolished, and used more efficiently elsewhere.

(6th.) The removal of the horn from Point Ste. Anne to Cape Chatte.

The alarm at Point Ste. Anne is practically useless, principally because it is located, not on the point, but at the head of a bay some distance west of the point, and in such a position that no vessel can come within three miles of it without being in danger. The only reason we can guess at for such a location is the presence of a running stream of water at the site, ensuring an unfailing supply. The horn is an old fashioned machine and we doubt its availability for another station, especially as our experience with it proved very unsatisfactory. There is a good fog-alarm building and dwelling at the site, but we question whether it would pay to remove these if any reasonable price could be obtained by selling them where they stand. In any event we can see no object in continuing this alarm at Pt. Ste. Anne. Cape Chatte is well situated, so far as position goes, for a steam fog-alarm site, except for the fact that it must be backed by high and abrupt cliffs. There is no room between the foot of the cape and high water mark to place it near the water line, and if located at the same elevation as the lighthouse, the keeper's dwelling would have to be removed so that it might occupy the most prominent point. There is no water, nor any prospect of obtaining it, near the site, and the landing is very much exposed to the sea, all of which combine to make the mechanical difficulties of establishing a steam fog-alarm there very great, but we consider the site as admirably adapted for a bomb station. Bombs could be projected out over deep water to a sufficient distance from the cliff to make the sounds effective. The fact that bombs require no skilled attendant is also a great point in their favour for this place. \$200 per annum would pay the lightkeeper for the extra labour involved in firing bombs. The cost of the bombs themselves would be greater than that of a steam fog-horn, but the exact figures we have not yet ascertained.

If a steam fog-signal were considered preferable, Point Chatte, about five miles below Cape Chatte, is the best available site, being prominent, with a fair landing and a spring of water near it. The site would be the gravel beach, and the cost of the building and machinery, say \$4,000. The expense of maintenance would be about the same as at Point Ste. Anne.

7th. Should the fog-alarm be re-established on the Magdalen Islands.

We have gone carefully into the question whether there would be any advantage in re-establishing the fog-alarm lately dismantled at Etang du Nord, at any other point on the Magdalen Island, and we have come to the conclusion that no fog-alarm is required in that district. The Islands are not in the track of general navigation, and the fishing-craft which mostly frequent them, could not well avail themselves of any fog-alarm. An application has been made on behalf of the steamer plying between Pictou and Amherst Harbour, for a fog-alarm at Entry Island, but she would only require it once a week, and we do not see that it would be of much further service.

We have been impressed by the ill-chosen position of all the lights on these Islands. That on Entry Island is on a low point on the south shore, and is cut off on all bearings from north-east to south-east by higher points to the eastward. If it had been placed on one of the loftier capes, $\frac{1}{2}$ mile farther eastward, it would have shown over the whole arc it now illuminates, and in addition, would have been seen more to the eastward and also to the northward in the direction of the Bird Rocks, which would have been an important advantage. If at any time it should become necessary to rebuild this lighthouse, or if the dispute with Mr. Dixon respecting the right of way should end in any serious trouble, we would recommend its removal. The lighthouse on Amherst Island is on the south point, which is comparatively low, whereas the south-west point is a high bold cape and more prominent, which now interrupts the light to the westward, although it can be seen over a small arc to the northward of the high point through a gap in the hills. The light, if kept on Amherst Island at all, should have been placed on the summit of the south-west point. Theoretically the best place for this light would have been on Dead Man's Isle, but this site is so difficult of access that unless for a first class light, it would not be worth while to incur the expense of building and main-

taining a light there. We question whether the traffic in this vicinity has been and is sufficient to justify such an expenditure.

The position of the fog-alarm lately discontinued at Etang du Nord, was very unsuitable and badly chosen, being on the low ground at the head of a bay, with hills on both sides completely shutting out sound from seaward and even hiding the building in the direction in which sound was required.

The lighthouse at this place, although probably better located than either of the other lights on the Islands, would have been of more general service if placed on the point of Grosse Isle, as in its present position it is out of the track of any vessels sailing past the Island and is too far north to answer as a guide into Gull Island harbour.

8th. Could the location of Greenly Island fog-alarm be improved?

The fog-horn at this station is too far from the shore, consequently towards the eastward the sound is obstructed by higher land. All this is explained in the notes on recommendations from shipmasters. We consider it would be desirable to move the station at as early a date as possible. In the meantime, we feel sure from our own observations that the horn is sufficiently strong to be heard in time to prevent a disaster, and that it is preferable to the gun which was in use there before.

9th. Improvements in Belle Isle fog-alarm.

These are explained in detail in the notes on the suggestions made by masters. (Appendix A.) We would only add that we are satisfied that bombs would be in every respect the most satisfactory signals for this station. They would probably cost a little more than the present gun, but that cost would be made up by the extra facility of handling, landing and storing.

10th. Additional alarms required.

This is answered in our notes on suggestion of ship masters. (Appendix A.) We are in favour of establishing alarms at Cape Magdalen and Cape Chatte stations, of forming new stations on the North Shore of Labrador and at the East and West ends of Hare Island North Channel, and of discontinuing the stations at Point St. Anne, and possibly also Green Island and Lark Islet.

General Remarks on Fog-Alarm Service.

Our observations on this trip have impressed us with the fact that ship masters place too much dependence upon, and expect more than they should from, fog-alarms along the coast. It cannot be too emphatically impressed upon them that a sound signal is under no circumstances so reliable as a light, for the best sound signals in the world will give very different results under varying conditions of the atmosphere. Our own experiments in this direction bear out the results of the very extensive observations made in England and the United States, with appliances for the strict scientific determination of the value of the different sound signals. We have heard comparatively weak signals at long distances, while more powerful ones were inaudible at much shorter range. We have heard two reports from guns fired under, as nearly as could be determined, identical circumstances, give very dissimilar results. In view of these facts, with which every intelligent navigator should become acquainted, and of which most of them must have had some experience, it is difficult to understand why many of them expect uniformly good results from all fog-signals on our coasts, and why there are some who run considerable risks, placing their ships in danger, on the assumption that they are going to pick up the alarms exactly where they expect to, although the vessel may have been navigated by dead reckoning for some time previous, and little account taken of the set of the currents. By using the lead more frequently, when approaching these points, no doubt fewer casualties would occur.

There are very few fog-alarms that are in ideal situations, or have been placed where they would be free from detrimental local influences, although the best locality available has in most cases been selected. We would instance in illustration of our meaning the fog signal at South Point Anticosti. It is as far out on the point as it can possibly be placed, with no trees, buildings or projections of land to obstruct the

sound in any way in a seaward direction, and yet we are convinced that the shallow water over the submerged reefs which extend for nearly two miles off the point, often cause unequal heating of the atmosphere and raise strata of air of variable temperature and density, through which the sound cannot penetrate. Somewhat similar conditions prevail at Heath point. Yet though the surroundings lessen the value of the signals, we have no doubt that mariners would complain if either of these stations were abolished.

As a general principle, fog-signals should only be located at points which can be approached very closely without danger. At best any fog-signal must be considered as defining locality, not distance.

Guns are, as a general rule, inferior to fog-signals operated by steam, in consequence of the short duration of the sound and the comparative infrequency of the signal. To fire a gun as frequently as desired by many of the correspondents of the Department would involve expense much greater than is required to maintain an efficient steam signal, and an explosive signal should, we think, for this reason, only be adopted at a station like Belle Isle, where there would be mechanical difficulties in the way of establishing a steam signal.

With regard to the frequency with which guns should be fired, we do not feel that we can justify a recommendation for much shorter intervals than half an hour, which is given at present, in consequence of the greatly enhanced expense which would ensue. A vessel in dense fog has no right to run at such a speed as would necessitate signals at very frequent intervals. If running at five or six miles an hour, she should come within range of a gun before getting into the zone of danger, although we recognize the fact that under special conditions of weather a vessel may get very close to a gun without hearing it. The experience of the "Montreal" is a case in point.

Lighthouse Service.

1st. Improvements required in existing stations.

This is a matter that is continually being brought before the notice of the engineer of the Department and the inspector of lights for the district, and they have gradually been improving the system throughout the river, and some suggestions are embodied in the notes on the recommendations of masters, but on the whole we are of the opinion that the lights on this coast are of fair quality and answer most of the requirements of shipping.

The attention of the Department has been drawn by masters to some of the most powerful European lights. We consider it unreasonable that any such perfection should be expected in a district where the conditions are so different, and the task of maintaining lights of any kind an exceedingly difficult one, the climatic influence and the distance in every way contributing to hinder good work. In view of Canada's small population, immense coast line and the freedom from light dues, which all vessels making her ports have at present, we consider she is doing every thing that can be expected from her in this direction.

2nd. New lights most required.

In clear weather, when the lights can be properly seen, ship-masters do not find much difficulty in navigating the Gulf and Strait of Belle Isle with the existing lights, and we have had this in view in strongly recommending only one new light on the north coast of Labrador. The opinion of the majority of the masters of the principal steamship companies using the Strait of Belle Isle, in reference to the most desirable improvements in aids to Navigation, have been carefully analyzed by us, and these suggestions, together with our remarks, are annexed in convenient form. (Appendix A.)

Mr. Rae drew our attention to the desirability of establishing a new light at the east end of the Island of Orleans, or on the south shore opposite, for the purpose of assisting vessels downward bound to clear Point Levis shoals on the starboard hand and Beauport flats on the port hand.

The light would not be of so much service to vessels coming up the river, as the limits of the channel are better defined by the coast line, being narrower, and the city lights would help them make their course.

Captain Laroche and Mr. Bruneau both think a light here would be a benefit to the general navigation.

Nothing more than a lantern on a pole would be required, placed near the outer end of the wharf used by the ferry steamer. Probable cost: Lantern, \$100; pole and small box to hold lantern, \$30; attendance \$50 to \$75 per annum.

It is thought that the Orleans Ferry Company, who principally use the wharf, would not be likely to render much assistance in maintaining the light, as they do not run through the night.

The Buoy and Beacon Service.

We had not very good opportunities for examining the buoys or inquiring into the service on this trip; all the buoys being located in the upper part of the district we visited. We are aware that the buoyage of these waters as a whole gives satisfaction to the parties interested. We have made one or two suggestions in previous parts of this report with regard to a slight change, which, so far as we can see, includes everything necessary in this direction at present.

No doubt the system of having these buoys under the direct control of the Department and attended to directly by the Government steamers is best calculated to ensure the efficiency of the service. They are better looked after than they would probably be under any contract system, and in view of the great interests at stake, we think the Department can not run any risk of having them neglected. We believe the service could be more cheaply performed under contract, but all through the season there is scarcely a week that some buoys have not to be replaced, filled with gas, or otherwise attended to, and it is these details that a contractor might probably neglect, and which are really the most necessary, looking to the importance of the service. In fact to ensure the safety of vessels navigating these waters, the position of all buoys require frequently to be verified, and especially after every severe storm.

Steamship Service.

Navigation in the river opens about the 15th April and closes about the 1st December.

The "Napoleon" is ready to take down the light-ships as soon as the channel is open, and remains to protect them against floating ice until all danger from that source is over. This year she went out on the 15th April and returned on the 22nd April. The "Druid," being a paddle boat, never could undertake this service. After performing the above work, the "Napoleon" then helps the "Druid" to place the gas buoys between the 1st and 8th May.

The "Napoleon" is next employed to serve the lights in the river down to Bic, between the 1st and the 15th June. Her next trip is to the Gulf lights down to the east end of Anticosti, including the Gaspé coast, between the 1st and 15th July. From the 1st to the 31st August, the Strait of Belle Isle and outer Gulf lights are served, and a cargo of coal taken at Pictou after every trip. In September, if time allows, she goes to Pictou for coal.

She leaves for her last trip to the Gulf lights in the beginning of October, returning to Quebec about the 1st November, with coal from Pictou. After that she attends to the lightships until they are placed in winter quarters, and then takes the place of the lower Traverse Lightship, until the last vessel from Quebec has gone to sea. Occasionally the "Napoleon" has been required to lead and pilot out the last vessels.

It would thus appear that the only spare time the steamer usually has, is during the month of September, and she has been so fully employed latterly, that she has not been in dry dock for four years, and shows the want of scraping and painting, besides requiring examination and repacking of the propeller.

The "Druid" in the spring places all the buoys below Quebec in their positions between the 15th May and the 1st June. She serves the lights between Quebec and Montreal, and later on a few of the smaller lights below Quebec. In the fall she takes up all the wooden buoys and some of the gas buoys. During the balance of the season, she is employed in keeping the buoys in order, and in doing such work down the river as may prove necessary. It is usually found that this keeps her pretty steadily employed, or at least to such an extent, that it would be impossible with the present arrangements to use her for extra service. So far as we can judge, the only way in which the "Druid" could be spared for the lakes, would be to hire a steamer to attend to the buoyage in her place. The "Napoleon" might probably be utilized during September to serve the lights above Quebec, although the "Druid's" light draft is a very great advantage for those waters. The "Napoleon" is not a suitable vessel, even if she had time, for handling gas buoys. She is so large and heavy that it is difficult for her to approach them with the necessary caution and her hoisting gear has proved not sufficiently strong to lift them, when she attended to the buoys last year. She caused many of them to leak by starting the rivets. A tug boat such as could be hired to do the work would be too small to handle them in the admirable way in which the "Druid" does. If the "Druid" is removed from the Quebec Agency we are strongly of opinion that the work in connection with the buoyage below Quebec can not be performed by the agency.

The results of our examination into the improvement of the approaches to Halifax Harbour, we ask leave to submit separately.

We have the honour to be, Sir,

Your obedient servants,

WM. P. ANDERSON,

Engineer.

W. H. SMITH,

Chairman.

REPORT ON AIDS TO NAVIGATION IN THE APPROACHES TO HALIFAX HARBOUR.

WM. SMITH, Esq.,

Deputy Minister of Marine.

SIR,—We have the honour to report that, in accordance with instructions received, we went over Halifax Harbour in the "Newfield," in company with Capt. Guildford and the Inspector of lights on the 5th August last, and that we have since carefully considered the several recommendations made, having in view improvements to the aids to navigation in entering that harbour.

The first suggestion that was made in this direction was a series of recommendations from masters of the Allan Line, in favour of marking certain of the shoals in the harbour with gas buoys. This suggestion we are not prepared to recommend, because we think that the work can be done in a different way more efficiently and at less expense. The initial cost of gas buoys is very great, their establishment involves also the setting up of a gas-making apparatus, as we understand that the ordinary coal gas is not adapted for storing under pressure; moreover, we are convinced that the chief want of the harbour is not additional lights, but additional guides in foggy weather.

The evidence before us is almost unanimous in agreeing that there is no difficulty in entering the harbour at night with the present system of lighting, and that it is only in fogs and snowstorms that any trouble is experienced.

The same reason will dispose of the suggestions for establishing electric buoys, which would be even more expensive than gas buoys.

Taking up the general question of improving the fog-alarms, we consider that the first requisite is to so mark the various approaches to the harbour from the outside, that some signal can be picked up although a vessel may be a little out of her course either to the eastward or westward. At present there is a can buoy moored off the Brig Rock, about $26\frac{1}{2}$ miles nearly due east, magnetic, from Chebucto Head, and $4\frac{1}{2}$ miles W.S.W. from Egg Island (we believe it is the intention of the Department to replace this with the bell buoy formerly in that position), an automatic whistling buoy in the fairway of the entrance, about 7 miles outside the general coast line, and about 7 miles in a S.E. direction from Chebucto Head; a bell buoy on the Sisters, about $6\frac{1}{2}$ miles to the westward of this, and 2 miles to the eastward of Sambro Light, where vessels from the westward can turn into the entrance to the harbour, and finally a steam fog-whistle on Sambro Island.

The many recommendations made for a light vessel or additional automatic buoys, somewhere in this area, show a feeling of insecurity with reference to the outside approaches to the harbour, which feeling is intensified by the now well established fact that the Sambro fog-whistle is not reliable.

A study of the chart makes it readily apparent why the Sambro fog-whistle should not be efficient. It is surrounded by rocks and shoals extending seaward in all directions for about two miles, and these shoals must cause so much unequal heating of the atmosphere that the air can rarely or ever be in the homogeneous condition necessary for the transmission of sound. Sambro is, from its surroundings, a station manifestly unsuitable for a steam fog-whistle site.

Chebucto Head, on the other hand, stands out boldly into the channel, with good water close to, and a fog-alarm down near the water's edge, under the lighthouse, would, in our opinion, give uniformly good results, and also mark a very important point of departure for entering the harbour. We, consequently strongly recommend that the steam fog-whistle station now on Sambro Island be removed to Chebucto Head.

A lightship containing a strong fog-whistle anchored three or four miles to the southward and eastward of the present automatic buoy has been recommended; the idea of establishing this lightship being to furnish a powerful call outside of all dangers, that would be a rallying point for vessels from every direction, whence a course could be steered to the buoys inside of Chebucto Head. The difficulty and expense of maintaining a vessel on this station are so great that we do not wish to recommend it if the problem can be solved in any less expensive way, and we think this can readily be done. A lightship was established here some years ago, but was not a success. Not only was she too far out to be readily picked up by all vessels, but the necessary heavy moorings nearly swamped her, and the vessel and crew had a narrow escape from destruction. We consider that if an additional automatic buoy were placed on the outer bank of Sambro Ledges, it would be a good leading mark for vessels from the westward, and should be picked up by vessels from the eastward, that had fallen out of their course. The present automatic buoy might if thought desirable, be moved two and a-half miles to the eastward of its present position, over the gully on the edge of the 40 fathom line, so as to be a little more in the course of vessels coming from the eastward, and would be passed earlier. A vessel running down the coast in foggy weather would then be able to pick up, in succession, the Sheet Harbour whistling buoy, the Brig Rock buoy, which may be supplemented at some future time by a steam siren at the Egg Island Station, then the outer automatic buoy, whence a course could be shaped for the Chebucto Head fog-whistle or the present inner automatic buoy. If from any reason she was too far to the southward to catch the sound of the outer automatic, she ought to be brought up by the Sisters bell buoy, or the proposed automatic buoy to be placed on Sambro Banks. As an extra precaution, the strongest obtainable bombs might be fired from the Sambro Station, but this station is so peculiarly situated that we doubt whether any description of fog-alarm should be relied upon except as a warning to vessels that had missed their way. It certainly should not be made an objective point, and vessels should keep as far off the reefs as possible, especially with S.E., S. and S. W. winds, when a heavy surf drives over them.

In connection with the outer approaches a suggestion has been made that a steamer, patrolling between Maugher's Beach and the outer automatic, could guide vessels in. Knowing the difficulty that pilot boats have at present in finding vessels in fog, we question whether this arrangement would prove of any great advantage, and we are not prepared to recommend it, but the number of large automatic, bell, and can buoys upon the Nova Scotia coast at this date, together with the additions recommended in our report, and others that it may from time to time be found desirable to place in prominent positions upon the edge of the 40 fathom line of soundings, running along the coast line, for the guidance of large ocean steamers into Halifax harbour, and also for the general navigation of the coast and other harbours, may render it necessary to have a buoy boat in commission, whose special work would be attend to this service.

If we now assume that a vessel has found the outer automatic buoy, the Chebucto fog alarm, and consequently made the entrance to the harbour, the next desideratum is the most efficient marking of the shoals in running up. All these are now buoyed except the Neverfail shoal, which carries $4\frac{1}{2}$ fathoms at low water. The various recommendations that have been made, looking to the improvement of this part of the navigation (leaving out of consideration the suggestions for gas buoys, already disposed of), have been for a bell buoy on Pleasant shoal, a more conspicuous buoy on Mars Rock, and a bell buoy or other large buoy on the Neverfail. The Neverfail shoal should certainly be conspicuously buoyed, and we think that a bell buoy should be placed here, if not considered preferable on Thrum Cap shoal. There are considerations in favour of both situations for the bell buoy. On the Neverfail it could be used as a new point of departure by deep draught vessels coming in on the main channel; on the Thrum Cap it would be at the best point for vessels coasting in from the eastward inside the automatics. The buoy at Mars Rock should be of the largest available description, surmounted by a distinguishing cage, as should be also that on the Thrum Cap, if the bell buoy is allotted to the Neverfail.

The Middle Ground off McNab's Cove might also be buoyed, although no vessel has within our knowledge ever sustained any damage by striking upon it. Having in view however the probability of larger draught vessels making Halifax a port of call in the future, it would then become very necessary to buoy this shoal.

It is a matter for consideration whether the inner automatic buoy, now maintained off Chebucto Head, cannot be dispensed with when the fog-whistle is established at that station. We will however in any event, advise that it should be retained in its present position until the Chebucto Head fog-alarm has been in operation for some months, and has proved efficient under all conditions of weather. Another question with reference to this buoy is whether, if permanently retained, it might not profitably replace the can buoy now maintained on the Portuguese Shoal.

An alarm buoy upon Point Pleasant does not appear urgently necessary at present, as the fog-whistle on Maugher's Beach, and bell on George's Island, should be sufficient to guide vessels into the harbour, but there are certain conditions of fog and wind which prevent mariners from locating exactly the positions of these alarms, and vessels coming across the Atlantic often have their compasses disturbed and unreliable; their heads having been in a westerly direction for a whole week, the retentive magnetism has a tendency to draw the north point of the compass to the left, or towards Point Pleasant, and then something must be seen or heard to enable a vessel to pass this point in safety. Many masters of steamers are in favour of this change, and if made a buoy of the American pattern would probably be most suitable in consequence of its sounding quicker in still water.

We would summarize our recommendations as follows:—

Remove the steam whistle from Sambro Island to Chebucto Head, and, if found of any service, fire the strongest obtainable bombs every half-hour from Sambro Island.

Moor an automatic buoy from $4\frac{1}{2}$ to $5\frac{3}{4}$ miles south of Sambro Island on the outer bank, and perhaps remove the outer automatic farther eastward.

Moor a large middle ground buoy on the Neverfail, and replace Thrum Cap buoy by a bell buoy, or, as we prefer, place the bell buoy on the Neverfail, and place the largest available buoy, with a distinguishing mark, on the Thrum Cap.

Place a distinguishing mark on the Mars Rock buoy, place a large can buoy on the middle ground, off McNab's Cove (when necessary), and change Point Pleasant to a bell buoy, if urgently required, after other changes are completed.

The cost of the changes, chargeable to construction, would be approximately :—

Removal of whistle to Chebucto Head.....	\$ 2,000 00
1 automatic buoy with moorings for Sambro Bank.....	1,200 00
1 bell buoy with moorings (Neverfail).....	1,200 00
Improvements to existing buoys.....	600 00

Total.....	\$5,000 00
------------	------------

The extra cost of maintenance would be only the cost of bombs at Sambro, which would be partly offset by the increased economy of maintaining the whistle at Chebucto Head, as compared with Sambro.

The whole respectfully submitted.

WM. H. SMITH,

Chairman of the Board of Examiners of Masters and Mates.

WM. P. ANDERSON,

Engineer of Marine Department.

APPENDIX A.

REPORT ON RECOMMENDATIONS MADE BY MASTERS OF VESSELS USING THE STRAIT OF BELLE-ISLE.

Camp Island.

Stewart, "Lake Superior," light.

In our opinion there is no necessity for one, and the Department would not be justified in attempting to light both the entrance to the north as well as that to the south of Belle-Isle.

Belle-Isle, North East End.

Wylie, "Polynesian," light and steam-whistle; Murray, "Lake Huron," fog signal; Herriman, "Lake Nepigon," fog signal and light. A station here would be of service to steamers coming in on the Great Circle route, but there is a dangerous outlying reef that would greatly reduce the value of a fog signal. To outward bound vessels it would be of no use whatever, as they should endeavour to make Cape Norman before taking a departure for Belle-Isle, and most steamers when going to sea, pass out to the south of the Island. The two present stations, Belle-Isle and Cape Bauld, are comparatively so near (14 miles apart) that we consider there are other localities where new lights and fog alarms are more urgently required.

Cape Bauld.

Carey, "Lake Winnipeg," light and fog signal to be shifted to N. E. Belle-Isle. If a light and fog signal were decided upon on the N. E. end of Belle-Isle, we consider the Department should not at present incur the expense of maintaining three stations in such close proximity to each other, as the present ones. No doubt the Cape Bauld station is well located, and it has been found of great value to vessels entering and leaving the strait, and also to coasters.

Belle-Isle, Present Station.

Schwaner, "Cremon," gun to be replaced by siren or fired more frequently. Dunlop, "Canadian," rockets to fire every five minutes.
 MacNicol, "Carthaginian," bombs.
 Barret, "Circassian," bombs from lower light. Fog horn liable to be mistaken for Cape Bauld.
 Menzies, "Corean," bombs instead of guns.
 LeGallais, "Grecian," gun placed lower down.
 Brown, "Hibernian," lower gun.
 Christie, "Norwegian," a more efficient fog signal, or bring gun to level of lower light. Fire every 15 minutes, instead of every 30 minutes.
 Ritchie, "Parisian," gun as at present, or bombs every 15 minutes.
 Richardson, "Sardinian," bombs.
 Murray, "Lake Huron," 15 minute guns instead of half hourly.
 Campbell, "Lake Ontario," siren.
 Spliedt, "Steinhof," fog siren.

We are of opinion that bombs of great power fired out over the water from the present situation of the gun would be preferable to the gun. Our experiments with a gun at lower elevation, did not give such a pronounced improvement as to warrant the extra expense of removing the gun station from its present position. It would be almost impossible to maintain a steam fog alarm at this place in consequence of the difficulty of landing fuel, also in obtaining water at the point required, and in keeping the machinery from the influence of severe frost.

Cape Norman.

Bentley, "Assyrian," fog signal.
 Dunlop, "Canadian," fog signal approved.
 MacNicol, "Carthaginian," fog signal should be powerful and easily distinguished from any others in the vicinity.
 LeGallais, "Grecian," endorses fog alarm.
 Brown, "Hibernian," approves signal.
 Christie, "Norwegian," approves fog signal.
 Ritchie, "Parisian," approves fog signal.
 Moore, "Siberian," approves fog signal.
 Murray, "Lake Huron," approves fog signal.
 Herriman, "Lake Nepigon," approves fog signal.
 Campbell, "Lake Ontario," gun from Belle-Isle.
 Stewart, "Lake Superior," fog alarm.
 Carey, "Lake Winnipeg," fog siren.
 Spliedt, "Steinhof," fog siren.

The fog horn here will be in operation in a week's time, and will give a blast of five seconds' duration, with 35 seconds' interval between the blasts. This will be quite distinct from anything else in the Strait. The fog horn is located 300 feet eastward of the tower on the face of the cliff, which was the best place practicable, as any more prominent place would have been exposed to the sea. The sound will have to pass over a reef and shoals to the eastward, which may to some extent act unfavourably on it in this direction, but we hope it will prove an effective aid especially to outward bound vessels.

Greenly Island.

Ritchie, "Parisian," re-establish the gun.
 Carey, "Lake Winnipeg," gun better than present horn.

The fog horn at this station is located 500 feet back from the water's edge, and the sound is intercepted down the Strait by the higher part of the island. If the building were moved about 300 feet southeastwardly on to the most southerly point safe from the sea, it would doubtless be more effective. Estimated cost of moving buildings and adding a large coal store, \$1,000.

Green Island or Other Similar Point.

Dunlop, "Canadian," light and fog signal.
 Menzies, "Corean," light and fog signal.
 Richardson, "Sardinian," light and fog signal.
 Bentley, "Assyrian," a light on Flower Ledge.
 LeGallais, "Grecian," light opposite Point Amour with fog signal.
 Brown, "Hibernian," light on Savage Pt.
 Christie, "Norwegian," light Savage Pt.
 New Ferolle Point.
 Barrett, "Circassian," light.
 Ritchie, "Parisian," powerful flashing light.

These are all suggestions for aids to navigation on the Newfoundland side of the Strait nearly opposite Point Amour and Greenly Island. In the first place we do not see why it should be expected that both sides of the channel should be lighted where the width is only about 10 miles and the approaches to the north shore are so much more free from obstruction than those of the south side. The principal argument in favour of lightening the south side is the less prevalence of fog, but not-

Wylie, "Polynesian," light and fog gun.
Stewart, "Lake Superior," light.

withstanding this we feel sure that any proposition for the removal of the present lights and fog signals from the north to the south shore would meet with much opposition.

Point Rich.

MacNicol, "Carthaginian," more powerful light and fog signal.
Christie "Norwegian," fog signal.
Herriman, "Lake Nepigon," fog signal.
Campbell, "Lake Ontario," fog signal.
Schuld, "Grasbrook," fog signal.

The light at this station can doubtless be improved by rearranging the grouping of reflectors and using improved lamps. Cost estimated at \$500.

So far as its position on the coast goes, Point Rich is admirably situated for a fog alarm station, but we fear that the reefs that extend to the westward of it might greatly interfere with the transmission of the sound. The fact that no vessels can safely approach within a mile of the light house, might cause any alarm station here to prove disappointing.

Cape Whittle.

Bentley, "Assyrian," light on Cape Whittle.
Brown, "Hibernian," light here or on Murr Rocks.
Wylie, "Polynesian," light on St. Mary's Island.
Murray, "Lake Huron," flash light on St. Mary's Island.
Herriman, "Lake Nepigon," light and fog signal.
Stewart, "Lake Superior," light.
Schuld, "Grasbrook," light.
Murr Rocks.
Dunlop, "Canadian," light and for signal.
LeGallais, "Grecian," light.
Brown, "Hibernian," light here or Cape Whittle.
Christie, "Norwegian," fog signal.
Moore, "Siberian," light.
Campbell, "Lake Ontario," light on Mecatina.
Schwaner, "Cremon," light and fog signal on Murr or Mecatina.

There is no place in the Gulf where an additional light would be of so much service as in the vicinity of Cape Whittle, where it would be a turning point to go through the North Channel of Anticosti, or to make Heath Pt. Light. For this reason we prefer this point to Murr Rocks or any other locality farther east. The South Makers ledge is the outermost reef in this vicinity, but it is not much above water and would require a very heavy masonry structure. The south-west end of St. Mary's Island seems to be the nearest available site above the action of the water. Wherever a light house is put on that shore, it should be accompanied by a fog alarm, as there is frequent fog in this vicinity, especially with south-east, south and south-west winds.

Heath Point.

Schwaner, "Cremon," gun fired every 10 minutes.
Buoy outside reef replaced.
MacNicol, "Carthaginian," more powerful light and gun fired oftener.
Barrett, "Circassian," an automatic whistling buoy, 8 m. S. E.
Murray, "Lake Huron," gun every 15 minutes.
Campbell, "Lake Ontario," better fog signal.
Spliedt, "Steinhof," siren instead of gun.

The light is now a catoptric light. It would be improved by converting it into a second or third order dioptric light, at an expense of between \$3,000 and \$6,000. The firing of the gun every 10 minutes means treble the expense, and the most costly steam fog alarm would be infinitely cheaper, as well as more effective. In consequence of the great distance which the reefs extend beyond the point, we fear that no fog alarm could be of much use here. A buoy outside the reef would be undoubtedly of great assistance and is recommended.

Cape Magdalen.

Bentley, "Assyrian," fog signal.
Dunlop, "Canadian," fog signal.
MacNicol, "Carthaginian," fog signal.
Menzies, "Corean," fog horn.
LeGallais, "Grecian," fog signal.
Brown, "Hibernian," fog signal.

This point seems to be well located for a fog signal as the coast is bold, the landing good and the water ready obtainable. The whistles taken from Etang-du-Nord could be utilized here. The

Ritchie, "Parisian," fog signal.
 Wylie, "Polynesian," fog signal.
 Richardson, "Sardinian," fog signal.
 Murray, "Lake Huron," rocket.
 Stewart, "Lake Superior," fog horn.
 Moore, "Siberian," fog horn.
 Schuld, "Grasbrook," fog signal here or
 Fame Point.

cost of establishment say \$2,000, extra cost for engineer \$400 per annum, besides the usual cost for maintenance, fuel and repairs.

Cape St. Anne.

Schwaner, "Cremon," fog horn discontinued.
 Spliedt, "Steinhof," fog horn discontinued.
 Schuld, "Grasbrook," fog horn discontinued.

The horn at this place is, and always has been entirely useless, being at the head of a bay and a weak horn, so that any vessel within its range would be inside the zone of danger. We strongly recommend its abolition in the interests of economy.

Cape Chatte.

Schwaner, "Cremon," fog signal.
 Dunlop, "Canadian," fog signal.
 Richardson, "Sardinian," fog signal.
 Campbell, "Lake Ontario," fog horn.
 Schuld, "Grasbrook," fog signal.
 Spliedt, "Steinhof," fog signal.

Cape Chatte and Point Chatte are much better situated for a fog alarm station. The former place is high and it is a question whether a whistle or horn would be effective in consequence of the peculiar background, which might break up the sound. It would be difficult to land fuel and procure water here, but this station is admirably adapted for bombs. If a steam fog alarm were required in this neighborhood, Point Chatte, about five miles below the Cape, offers better facilities, as it is low with a good landing and water supply.

Pavilion River.

Stewart, "Lake Superior," light and fog-signal.

We see no necessity for any additional lights on the south shore of Anticosti.

South Point Anticosti.

MacNicol, "Carthaginian," better light.
 Has never heard fog whistle.

The light at present on the south point is a strong revolving one, and should be as bright as any in the gulf. This point is not well adapted for a fog-alarm station, having wide outlying reefs. The tabular statement of experiments with whistles and horns will show that the fog-alarm here is not heard regularly, and we doubt whether the most powerful alarm would overcome this defect, which is inherent in the site.

Bird Rocks.

Schwaner, "Cremon," gun to be fired every 15 minutes.

We do not consider this alarm station to be of sufficient importance to recommend the extra expenditure at present. If a ship is slowed down in a fog as she should be according to Art. 13 of the rule of the road, the officers ought to hear a gun before getting into danger, besides which the soundings in the vicinity and approaches are very characteristic.

Fame Point.

MacNicol, "Carthaginian," fog-signal here or at Cape Magdalen.
 Schuld, "Grasbrook," do. and change light.
 Barrett, "Circassian," fog-signal.
 Christie, "Norwegian," more powerful light.
 Ritchie, "Parisian," make flashes more definite.
 Campbell, "Lake Ontario," fog-horn.
 Spliedt, "Steinhof," change light.
 Schwaner, "Cremon," for signal and improve light.

The light can easily be changed to a white light, having a character distinct from others in the vicinity. This would involve no extra expense as the work could be done in Agency's workshops. A fog-signal could be established at Cape Magdalen more easily than here, as all the soundings are more convenient, and the distance between Cape Rosier and Cape Chatte signals would be more evenly divided.

Point de Monts.

Schuld, "Grasbrook," discontinue gun and replace by whistle.

We think there is no urgent necessity for any change at present in the existing arrangement.

Matane.

Schwaner, "Cremon," bell or whistling buoy off reef.

Menzies, "Corean," more powerful light.

Brown, "Hibernian," fog-signal.

Richardson, "Sardinian," increase power of light.

Stewart, "Lake Superior," fog-horn.

We doubt whether a whistling buoy at this point would be of any use. On a fine night, the rock can be cleared by taking two bearings of the light, and the distance run between them. During the day cross bearings or horizontal angles, will enable a master to clear it. There is, however, no necessity for any vessel to go so close to the land at this point. As there is generally little wind during the prevalence of fog in the River St. Lawrence, there would probably not be sufficient movement in the water to work this buoy.

Metis.

Menzies, "Corean," stronger light.

Richardson, "Sardinian," stronger light.

The light was strengthened last year, and if still insufficient, it would be necessary to replace it by a strong dioptric light, and put it in charge of a trained keeper.

Cock Point.

Barrett, "Circassian," whistling buoy 5 miles north.

The remarks in reference to Matane buoy, apply equally to Cock Point.

Father Point.

Schwaner, "Cremon," revolving light.

Menzies, "Corean," fog-horn.

Richardson, "Sardinian," fog-signal.

Campbell, "Lake Ontario," more powerful light and powerful siren.

Spliedt "Steinhof," stronger light.

The light should be improved, and we are in favour of a revolving light. The lantern is suitable, and the change could be made at a cost of about \$1,000 for apparatus only. In view of the importance of this station, we consider an improved fog-alarm would be of great service, and anticipate no difficulty in establishing a siren or powerful whistle. Probable cost \$3,000. Increased cost of maintenance \$200 per annum.

Dunlop, "Canadian," fog signals at all the light-house stations from Fame Point to Metis.

This simply means that some masters of ships are anxious to throw the whole responsibility of navigation upon the light and fog-signals.

Christie, "Norwegian," fog signals at all lights from Fame Point to Pilotage grounds.

Wylie "Polynesian," fog whistle at Martin R.

On a fine bold coast like that from Gaspé to Cape Chatte, without a single outlying reef, no Master exercising common prudence should get into trouble during average weather. When fog appears, every other necessary precaution ought to be observed.

Brown, "Hibernian," wants re-survey of the Gulf. Montreal Board of Trade, re-survey of Gulf.

Campbell, "Lake Ontario," re-survey of Gulf, and Strait of Belle Isle.

Montreal "Carthaginian, and Strait of Belle Isle.

We do not understand that a consideration of this question comes under our official instructions, and we have not given it special study, but we can say in general terms that a more detailed survey would be of great service, especially giving more numerous and accurate soundings at important points and places, such as the South and East coasts of Anticosti, the middle ground off Cape Whittle, the Bank off Mecatina and the west entrance to the Strait of Belle Isle. We understand that investigations are already in progress under parliamentary vote of last session.

Ritchie, "Parisian," all gas buoys to be flashing. The Department has already ordered occulting apparatus and colored globes with a view to improving them and rendering them more easy to be distinguished one from another, and on their arrival, steps will be taken to place them where they will be of the greatest service, should they prove efficient in their working.

APPENDIX B.

TRIALS OF STEAM FOG-SIGNALS.

Lark Islet, 11th July, 9 a.m.—At this station there are two machines complete in the same building, a Holmes and a Neptune horn. The Neptune sounded in 35 minutes, and the Holmes in 42 minutes, after the fires were lit. From the anchorage behind the station, the Neptune was much the louder. At one mile distant the Holmes horn was thought the louder, off Prince's buoy, the Neptune horn was distinctly the louder. When the ship was $6\frac{1}{4}$ miles E. by S. $\frac{1}{4}$ S. from station at 10 a.m., the Neptune horn was distinctly audible, the Holmes horn just audible, but not loud enough to be of any practical value. The horns were then stopped.

Bicquette, 11th July, 5 p.m.—There are here two Neptune horns, the older one in a building a short distance east, the newer one, a short distance north of the lighthouse. Both horns put in operation. Fairly audible from 5 p.m., when the steamer started, to 6.36 p.m., when they were lost. At 6.45 p.m. they were again audible. As they were only ordered to be blown for an hour, we cannot say whether they were lost through distance—about ten miles—or because discontinued. No appreciable difference between the horns.

Pointe Ste. Anne, 12th July, 10 a.m.—A Holmes fog horn, giving a very deep note, increasing in strength to middle of blast, and decreasing to end. The sound steadily and rapidly decreased as the ship left the station, until it was lost when she was 4 miles W. by N. from it.

South Point, Anticosti, 14th July, 3.55 a.m.—A 10-inch whistle and Neptune horn at this station in contiguous buildings S.E. of tower. Machines put in operation at 4.20, when ship was two miles S.S.W. of station. Blasts not heard. At 4.50 when ship was 2 miles S. by E. both horn and whistle audible about equally strong. A slight difference in favour of whistle increasing up to 4.55, when the difference again became less. At 5.05 ship $3\frac{1}{2}$ miles S.E. by S. $\frac{1}{2}$ S., horn barely audible, while whistle yet audible. From 5.12 to 5.25, both audible, though not serviceable. Both were lost at seven miles distant.

Greenly Island, 18th July, 1 p.m.—Two Neptune horns in the same building south of lighthouse. Could be heard distinctly for a mile, then rapidly became indistinct, and when ship was 3 miles S.E., sound no longer audible. In consequence of the position of the building, the sound has to cross the flat rocks on the south end of the island to reach this point.

Greenly Island, 30th July (return trip).—Both horns were put in operation at 9.32 a.m. At $4\frac{1}{2}$ miles distant sounds were lost, but after running a mile horns again heard faintly and finally lost at 7 miles, but could not be considered useful beyond the $4\frac{1}{2}$ miles.

Forteau, 19th July, 4.40 p.m.—A 10-inch whistle, 700 yards N.W. of horn, and a Neptune horn, 250 yards W. of the point, both in operation. Horn inaudible in the bay, whistle indistinctly audible, until ship became parallel with face of building, when sound became strong. Horn first heard when bearing E.S.E. one mile. At 5.46 horn suddenly became loud bearing N.E. At 5.53 the whistle was closed in by the land, which greatly reduced the sound, so much so that if not listened for, it

might easily have been missed. At 5.57 whistle was very indistinct, and at 6 o'clock when just N. of the lighthouse, bearing N.W. by W., it became inaudible, the sound being again caught at 6.06, the horn having meantime continued distinctly audible. Up to 6.18 the two alarms could be heard faintly, being 5 miles distant. At 6.24 at 6 miles the steam could be seen, but sounds were fairly lost.

Cape Bauld, 24th July, 5 a.m.—Two Neptune horns. The sound of the horns was heard, gradually diminishing to 5 miles N. E. by E. $\frac{1}{2}$ E., when they were still audible, but this was the limit of their utility as signals.

Cape Bauld, 29th July.—Horns again put in operation as the steamer was proceeding from Kirpon Harbour to Belle Isle, with results similar to the above, except that, as the wind was more against the sound, it was lost sooner. The sound was heard however regularly and sufficiently plain to be of the necessary service required of it.

Cape Ray, 1st August.—Two Neptune horns began blowing as the ship was in the cove. The sound heard increasing in intensity as ship approached the front of building, and then rapidly fell off until they became inaudible at less than two miles distant, after which they were not again heard.

East Point, P. E. Island, 3rd August.—There are duplicate horns in one building at this station. One horn put in operation when ship N. E. 1 mile distant. Sound very strong when ship rounding reef $1\frac{1}{2}$ miles distant. Gradually and regularly decreasing in intensity till lost at seven miles distant. This horn gave the most satisfactory sound of any tested.

Meagher's Beach, 5th August.—Horn put in operation while ship was inside harbour. Sound dull until the station was left $1\frac{1}{2}$ miles astern, and the vessel was abreast of Mars Rock buoy, when it was lost. At $2\frac{1}{2}$ miles it was again heard and then decreased in intensity until finally lost at 5 miles distant. In reentering the harbour the sound was picked up at 4 miles distant, and heard until horn left behind, but at no time very strong.

Sambro, 5th August.—The sound of the steam-whistle was heard at Chebucto Head, $4\frac{1}{2}$ miles distant. At this time it was foggy and two steamers were sounding their whistles and making an attempt to enter the harbour. Their masts could be seen above the fog, while their hulls were obscured.

APPENDIX C.

EXPERIMENTS WITH EXPLOSIVE SIGNALS.

These trials were conducted at stations where fog-guns are established, and were instituted with a view of comparing the several brands of powder furnished, of testing the efficacy of wads, and also of contrasting the report of gunpowder with that made by the Cotton Powder Co.'s explosive signals, and also with steam fog-alarms where possible.

Green Island, 10th May, 6 p.m.—1 round of 1889 powder without wad. 1 round of 1889 powder with wad. 1 round of 1888 powder without wad. 1 round of 1888 powder with wad. None of these were audible with the ship N.N.W. three and a quarter miles.

Bicquette, 11th July, 1890, 5.36 p.m.—Guns were fired as we receded from the station the reports were audible from the ship 10 miles down channel from the station, gradually losing power with distance run.

Father Point, 11th July, 8.15 p.m.—Four rounds of two shots each were fired at intervals of 20 minutes with 1889 and 1890 powder when the ship was 12 miles down channel from the station. Fourth and last round at a distance of 12 miles barely audible, with vessel steaming down the coast and no pains taken to secure silence.

No essential difference between powders. If anything the 1889 powder a little better than the 1890.

West Point Anticosti, 13th July, 9.40 a.m.—1 round of 1888 powder and one of 1889. 1888 powder gave the better report. Six shots fired as ship went down the coast, giving good results until gun was hidden behind the lighthouse at 10.16, when sound suddenly became muffled.

Bird Rocks, 10th July, 10.10 a.m.—1 round of 1888 powder without wad. 1 round of 1889 powder without wad. 1 round 1888 powder with wad. 1 round of 1889 powder with wad. These shots were heard from the top of the rock. The first was the loudest, the third being barely audible.

At a distance of $1\frac{2}{3}$ miles north. One round of three shots, 1890, 1889 and 1888 powder. 1888 was the loudest and 1890 gave the poorest sound.

$3\frac{1}{2}$ miles N.N.W. One round of four shots. 1888 with wad, 1890 without, 1888 without and 1890 with wad. 1888 without wad the loudest, the others about alike.

$4\frac{1}{2}$ miles N.W. One round of one shot each, 1889, 1888 and 1890; shots barely audible with engines stopped. 1888 powder gave the best report.

$3\frac{1}{2}$ miles W. One round of four shots. None of the shots audible, 1890 with, 1889 without, 1889 with and 1890 without wads. The engines were stopped.

Belle Isle, 26th July, 5.40 a.m.—At this station a 32-pr. carronade is established at the upper lighthouse, 420 feet above the sea. As an impression prevailed that better results would be obtained from a lower site, a similar gun was set up 200 feet lower, the lowest point in the neighbourhood where a suitable station could be found. The Cotton Powder Company's socket rockets were thrown out over the water from the upper station. These three signals were tested against one another.

$1\frac{1}{2}$ miles N. W. by N. from lighthouse, near Marion Point and Cove and close to the shore.

1 round of 1889 powder fired from upper gun; 1 round of 1889 from lower gun; 1 rocket.

The rocket was much the loudest. The lower gun showed no superiority.

1 round of 1889 from upper gun; 1 round from upper gun with 1888 powder; 1 from lower gun with 1889, and 1 from lower gun with 1888 powder.

These were heard from the cove where the vessel lay. There was not enough difference in the reports to render classification possible.

Belle Isle, 29th July, 5.10 a.m.— $1\frac{1}{2}$ miles S. W. $\frac{1}{2}$ W. 1 round of 1888 from upper gun; 1 round of 1889 from upper gun, 1 round of 1889 from lower gun and 1 round with 1890 from upper gun; 1 rocket.

The rocket was better than the guns. The lower gun gave the poorest results.

3 miles S. W. $\frac{1}{2}$ W. 1 round from upper gun without wad, 1888; 1 round of 1888 from upper gun with wad; 1 round of 1888 from lower gun with wad; 1 round of 1890 from upper gun without wad; 1 rocket; 1 round from upper with 1890.

The rocket gave the best report, having a fine clear sound with great reverberation. The lower gun showed no superiority. The 1888 powder gave the best results, and the 1890 powder the poorest. No appreciable advantage from wads.

$5\frac{3}{4}$ miles S. W. $\frac{1}{2}$ W. 1889 from upper; 1890 from upper; 1890 from lower; 1888 from upper; 1 rocket.

The rocket gave a fainter report than the former ones. The lower gun showed no superiority. The report of the 1888 powder from the upper gun was distinctly the best of the shots.

Then steamed N. 60° E., $7\frac{1}{2}$ miles, until the light was shut in by S. E. cape, about 2 miles distant.

1889 from upper; 1889 from upper without wads; 1889 from lower gun without wads; 1890 from upper; 1890 from upper with wads; 1 rocket.

When these were fired, the ship was close in behind the cape. The bursting of the rocket was seen, but no report heard. Only the 2nd, 3rd and 4th reports were heard, all very dull. Neither the lower gun nor the wads made any noticeable improvement.

2 $\frac{1}{4}$ miles N. W. by N. 1890 from upper; 1888 from upper; 1888 from lower; 1889 from upper.

The rocket was little if any superior to the best gun. The lower gun was no better than the upper. The 1888 powder was distinctly the best, with little to choose between the others.

5 $\frac{1}{2}$ miles W. N. W. 1888 and 1890 from upper. 1890 from lower. 1888 with wad from upper and 1889 with wad from upper and 1 rocket.

The rocket while audible was not as good as some of the guns. The report however, was followed by an echo. The lower gun showed no superiority. The 1888 powder again proved superior to the others and the 1890 powder was the poorest.

1 $\frac{1}{4}$ miles N. W. N. 1889 and 1890 from lower gun. 1889 and 1890 from upper gun.

All the shots were indistinct. The first shot from the lower gun was the best, and the 1889 from the lower and upper better than the other two.

2 miles N. W. 1889 from upper and 1889 from lower. 1890 from upper and 1890 from lower.

The second shot was decidedly better than the first; the third shot very dull and the fourth quite clear.

2 miles E. S. E. When the lighthouse was shut in by the point, some shots were fired, but they could not be counted or distinguished, being very much muffled by the intervening land.

Sambro Island, 2nd December, 1890. Trial made by Capt. Smith.

11.45 a.m. Proceeded out of Halifax Harbour. Much vapour upon the water. Temperature of the air + 15°, water 37°.

0.45 p.m. Vessel anchored S. W. by S., 1 mile from lighthouse, in 16 fathoms water.

1 p.m. Barometer 30.15. Wind light, N. W. Temperature of air + 16°, water 37°. Sea smooth. Very light vapour. Land in sight from Pennant Point to Chebucto Head and Devil's Island. Landed in the small cove to the west of the lighthouse, and selected a place for fixing the socket for firing the bombs off the gun platform, a short distance from the lighthouse. A bomb was fired which made a loud report in the still atmosphere.

1.55 p.m. Returned to the steamer, weighed anchor and proceeded in a southerly direction from the Lighthouse.

2 p.m. Abreast of the buoy on the S. W. breaker. Sound of whistle fair. Steered magnetic south from the buoy 1 mile.

2.10 p.m. Stopped the ship and hoisted signal for firing bombs every 10 minutes. First bomb fired gave a loud report, but the sound of the whistle was faint. Kept upon the same course and stopped at every $\frac{1}{2}$ mile run. At no time could we hear the whistle when steaming ahead, on account of the noise of the machinery.

Annexed is a summary of the experiments.

I consider the result proves the bombs to be superior to the whistle, under the atmospheric conditions for the day; and more powerful bombs would of course give a louder report.

BAROMETER, 30.00; TEMPERATURE, AIR + 15°; WATER, 37°

Noon, 2nd December, 1890.

Time.	Bearing of Island.	Distance.	Whistle.	Bombs.	Remarks.
0.45 p.m.	N. E. by N	1 mile			Vessel anchored.
2 do	Abreast of S. W. breaker buoy	1 cable	Fair sound.		
2 do	Sambro Isd. N. by E.	2 miles	Faint.		Air, 19°; water, 37°.
2.10 do	do	2½ do	Better	Good	Wind W.N.W. to west.
2.20 do	do	3 do	Fair	do	
2.30 do	do	3½ do	Faint.	Fair.	
2.40 do	do	4 do	Very faint.	Very faint.	
2.50 do	do	5 do	No sound.	Barely audible	
3 do	N. by E. ½ E.	5½ do	do	Faint.	
3.10 do	N. N. E. ¼ E.	5 do	do	Saw smoke	Report barely audible.
3.20 do	do	4½ do	Very faint.	Just audible.	
3.30 do	do	3½ do	Faint.		Heard bombs distinctly and saw the smoke.
3.40 do	do	2½ do	do		Loud report heard by all on board, although vessel was steaming ahead. Ceased firing and steamed towards the island to pick up boat.

APPENDIX D.

DIARY OF INSPECTION TRIP TAKEN BY MR. ANDERSON AND CAPTAIN SMITH, FROM QUEBEC TO BELLE ISLE AND RETURN TO PICTOU.

THURSDAY, 10th July, 1890.

4 p.m.—Left the Marine and Fisheries wharf, Quebec, in the SS. "Napoleon III." Had on board supplies for the lighthouses in the Gulf of St. Lawrence. Coal, powder, &c., for fog signal stations, and lumber for erecting a new fog-alarm building at Cape Norman, north coast of Newfoundland, in the Strait of Belle Isle. There were also on board a number of carpenters to perform the work, and the engineer who was to take charge of the fog horn at that point.

6.45 p.m.—Anchored off Bellechasse and visited the station.

9 p.m.—Landed at Crane Island wharf and inspected the lighthouse, Mr. Anderson made arrangements for trying red sectors to mark the dangers in the vicinity of these lights, as had been recommended by the Board of Trade and others.

FRIDAY, 11th July.

4 a.m.—Dropped anchor off Brandy Pots, landed and inspected the lighthouse, and afterwards examined the station and surroundings in connection with the application for a fog-alarm at that place.

8 a.m.—Reached Lark Islet, and landed on the north side of it. Ordered steam to be raised in the boilers at the station, and tested the fog-horns at various distances from the lighthouse, as the vessel proceeded towards Red Islet light vessel.

2 p.m.—Visited Portneuf lighthouse. Mr. Anderson inspected the breakwater which had been reported as out of order and requiring additional strengthening.

5 p.m.—Crossed over to Bicquette. Examined and tested the fog horns, and had some shots fired from the gun previously maintained there. This done, the vessel proceeded along the coast towards Father Point, and the sound was heard for 10 miles down the river.

9 p.m.—Reached Father Point and landed on a rocky shore, with some difficulty. Mr. Andersen examined the illuminating apparatus, as a request for improvements in it had been made to the Department. Arrangements were also made to have the gun tested.

SATURDAY, 12th July.

5.15 a.m.—The vessel reached Cape Chatte and anchored to the north-west of the lighthouse. The buildings were inspected, supplies landed and the locality examined to endeavour to find a suitable place on which to erect a building for a fog-alarm. The next place visited was Point Chatte, about five miles distant from the cape. This point, although low, stretches farther out to seaward than the cape, and it was also inspected to see if a site could be found for a fog-signal.

10 a.m.—Landed at St. Anne, and arranged to test the fog-horn which is at the head of the bay. Steam was raised and the horn tested, both while we were on shore and after leaving.

4 p.m.—The steamer anchored off the mouth of the Magdalen River to the East of the lighthouse. Cape Magdalen has been spoken of as a suitable place for a fog-alarm, as it is the point most masters of vessels endeavour to make, either going up or coming down the gulf. The position was examined and a site selected to the eastward of the lighthouse.

SUNDAY, 13th July.

2.30 a.m. Arrived off Perroquet Island, one of the Mingan group, Labrador. Landed and inspected the lighthouse and then crossed over the North Channel to the West Point Anticosti, where we arrived at 8 a.m. After inspecting the lighthouse, buildings, stores, &c., and landing a few supplies, arrangements were made to test the fog-gun situated at this station. This was done after leaving and while the vessel was steaming along the coast.

3.45 p.m. Arrived at South-West Point Anticosti. Fine clear weather. Remained at this station for a few hours, inspected it, and left the same evening for the South Point.

MONDAY, 14th July.

3.50 a.m. Anchored about two miles off South Point Anticosti. Wind blowing fresh from south-west. Landed through a nasty surf, and inspected the station, fog-whistle and horn, ordered steam to be raised and arranged to test the signals after leaving.

7 a.m. Steamed out, but not being able to hear the fog-signal, made a circuit of the station as near the shoals as the vessel could go, when the sound was picked up, steamed along the coast and reached Heath Point.

9 a.m. Anchored in the bay to the north-east of the lighthouse. Strong breeze from the south-west. Landed on the beach about $\frac{3}{4}$ of a mile to the northward of the station. The lighthouse and buildings were inspected and arrangements made for testing the gun. We remained here all day and toward evening the wind went down, the anchor was weighed and vessel proceeded toward the Bird Rocks, one of the Magdalen group, to the north of Prince Edward Island.

TUESDAY, 15th July.

3 a.m. Reached Bird Rocks. Commenced immediately to land the annual supply of oil, coal, powder, &c. Arrangements were then made to test the fog-gun situated at the top of the rock, to the north-east of the lighthouse. The gun was fired and tested by listening to the report from different positions upon the island, and afterwards by steaming in various directions some distance off the island. Advantage was also taken of the presence on board of several carpenters, who were going to erect the Cape Norman fog-alarm building, to utilize their services in placing a new oak crane post on the top of the cliff 110 feet from the level of high water mark. The old one was split and unsafe. The men worked continuously for 36 hours until it was completed.

During the time the vessel was anchored off these rocks, the weather was very fine and the water smooth, which enabled the master of the "Napoleon" to perform all necessary work. Several vessels were anchored in the vicinity of the rocks fishing, their small dories being seen in all directions. The broken telegraph cable was hanging over the cliff, the end coming down nearly to the water's edge.

WEDNESDAY, 16th July.

The vessel was still at Bird Rocks. In the evening made a circuit of the island while the gun was being tested.

THURSDAY, 17th July.

Hove up the anchor and proceeded on our course toward Newfoundland at daylight this morning. We intended visiting Point Rich on our way down the Gulf, but the wind from the West having increased during the day, the master considered it unsafe to attempt a landing, as it would have been dark by the time we arrived, the vessel's course was directed toward Greenly Island.

FRIDAY, 18th July.

7.45 a.m.—Reached Greenly Island, and landed after breakfast. It was raining and thick dark clouds hanging about. Thirty-five schooners were anchored in the bay between Greenly and Woody Islands. Their boats were distributed off the different points and in the small bays, engaged in netting fish, and while we were there some of them came in laden with cod. Capelin were very abundant and seen in large shoals. Several of them were caught by hand from the boat as we pulled toward the shore. The lighthouse was inspected, supplies landed and a new keeper placed in charge. The fog-horns were tested, and we took on board the 32 pr. carronade which was previously in use there, as it was intended to place it at Belle Isle on a lower elevation than the other one.

3.30 p.m.—Anchored in Amour Bay, 13 miles from Greenly Island. Landed and visited the lighthouse about one mile from the wharf. Steam was raised in the boilers connected with the fog-alarms, and the whistle and horn were each tested, both on shore and as the vessel proceeded down the Strait.

After landing the usual supplies for the season, we left for Cape Norman. Several icebergs were seen scattered and mostly upon the Labrador shore. Some of them were of large size.

11.30 p.m. Reached Cape Norman and anchored at the entrance of Marion Cove to the south-east of the lighthouse.

SATURDAY, 19th July.

3 a.m. Cape Norman. Commenced work and continued all day until 11 p.m., unloading timber and material for erecting the fog-alarm building. Carpenters were also sent on shore to assist the seamen in landing the stores, &c.

SUNDAY, 20th July.

This day was duly observed by a cessation of all work. In the afternoon we attended divine service at a small church in Cook's Harbour, three miles from the lighthouse. The little church was crowded with attentive listeners. We found the fishermen in all the coves about here were most particular in their observance of the day, and none of them would fish or hire any of their boats out upon that day.

MONDAY, 21st July.

3 a.m.—Work was resumed. The wind from the west blew strong, and increasing created a considerable swell during the latter part of the day, making it difficult to load the boats alongside the vessel.

During Monday, Tuesday and Wednesday we were anchored off Cape Norman. The heavy machinery, tanks, &c., and all other material were landed. The carpenters and crew were employed hauling them over a rough and stony road up to the lighthouse, about $\frac{3}{4}$ -mile. In fact there is no road at all, but simply a pathway used

by the keeper. There are no draft animals available at this point, and the workmen on shore could not have handled them alone, the crew with carpenters, were therefore occupied continuously from the time of arrival in most slavish work.

While at anchor off Cape Norman, we observed several large icebergs aground towards the coast of Labrador. One about four miles off in a N.N.E. direction from the ship, was aground in 32 fathoms water during the whole time we were there. Another was in a fixed position for some days, then broke in two, and the crystallized pieces rolled over making two distinct bergs which separated from each other.

July 24, 3.30 a.m.—Reached Cape Bauld, the north-easternmost extremity of Newfoundland, and anchored in a small cove to the S.E. of the lighthouse. Landed supplies and arranged for a trial of the horns as the vessel proceeded upon her course. After breakfast the anchor was hove up and the vessel's head directed for Belle Isle. The fog-horns were sounded for some time after leaving and heard for a distance of several miles off the Cape, the wind blowing from S.W., at right angles to the axis of the horn. As the wind increased considerably, the master considered it imprudent to attempt to land on the island. The vessel's head was therefore turned round, and we steamed to the harbour of Quirpon, Newfoundland, about three miles from Cape Bauld. Here we anchored for the night. Quirpon was formerly a favourite station for French fishermen, and visited annually by war vessels. It is now deserted by the Frenchmen, although their boats and houses are still there, in charge of a resident of the island. We passed several large icebergs to-day, and observed quite a number about in different directions. An irregularly shaped one of moderate size, nearly blocked up the mouth of Quirpon harbour, rendering it difficult to enter. While at anchor last night, wind blowing fresh from the west, a most beautiful aurora was seen. It commenced with an arc about 20° above the horizon; one end stretching towards Quirpon Island, and the other over the high capes outside the harbour to the north-west. The inner rim of the arc was well defined, while the outer was irregular and wavy, throwing out rays of flickering light, like numerous gas jets at first, increasing and expanding upwards into long nebulous bands. In a short time the whole scene would change into many flashing streamers, varying in intensity of light. Some of the jets appeared to be slightly tinged with a pale yellow colour, and the principal stars were seen through the nebula.

FRIDAY, 25th July.

5 a.m.—Left Quirpon at 5 a.m. Reached Belle Isle at 6.45, and 6.45 a.m. anchored in the bay close to the landing place and near where the steamer "Montreal" was lost last year. The supplies for the lighthouse were landed, which took the whole day and part of the night, as there was a quantity of powder, coal, &c. A short distance from where the vessel was anchored, two large icebergs were aground, which remained there the whole time we were at Belle Isle, and consequently the temperature of the surface water was greatly reduced; it being 34° , a difference of 16° from the temperature of Cape Bauld, and 20 from that at Quirpon harbour. The temperature of the surface water in the Strait of Belle Isle appears to be regulated by the quantity of ice floating about.

SATURDAY, 26th July.

Belle Isle.—Finished putting the stores on shore this morning, and later on the seamen landed the gun and carriage, brought from Greenly Island. The horse supplied to the light-keeper was found to be of little service in hauling the gun to the top of the island. The crew of the vessel were therefore obliged to draw it up themselves to the lighthouse, about one mile from the landing place. The difficulties which had to be overcome seemed to be nearly insurmountable, as the incline was at an angle of fully 45° in many places, besides the road being rough and uneven, with several boulders and smaller stones sticking out of it. The officers and men however, succeeded in getting it to the top of the hill 420 feet above the sea level. From this position it had to be lowered down over sharp jagged rocks, which formed the walls of a frowning cliff nearly 200 feet below the summit, until a natural plateau was

found, where the carriage was securely fixed upon a solid bed. Shortly after this work was performed, the gun was loaded and fired three times, while several people went to various points to listen to the sound. The lower part of the island was soon enveloped in a thick fog, which passed in patches over us, obscuring everything for a time.

Sometimes the land could be distinctly seen at Cape Bauld a distance of 14 miles across the Strait, and numerous icebergs with their glistening peaks observed above the mist. Later on when we returned to the vessel, the fog came on so dense, and the wind increased so rapidly, that the master considered it prudent to go to anchor farther off shore. During the whole of the night, we noticed the flash and heard the sound of the signal gun at the half hour intervals, from the distance of one and a half miles in a north-west direction, although the upper and lower lights on the Island were totally obscured.

SUNDAY, 27th July, 1890.

Lifted the anchor, steamed into the landing cove and anchored nearly in the same position we left yesterday. The weather was foggy, and very little wind from the S. Captain Smith and the secretary went on shore, but had some difficulty in returning to the ship on account of the dense fog, as the vessel could not be seen until within a few yards of her. On the top of the island they found it was blowing a gale of wind, while at the same time it was nearly calm at the ship.

1 p.m.—Left the cove and steamed towards Quirpon Harbour, where we arrived at 3.30 p.m. The wind was increasing from west south-west and the barometer falling. After going a distance of a few miles from Belle Isle, the fog cleared up and we could see the Newfoundland coast distinctly.

MONDAY, 28th July.

Quirpon.—On account of the strong and increasing wind, which had canted to west north-west, the master was obliged to moor the ship with two anchors. The vessel remained at Quirpon all day. During this time some of the seamen took a boat and went alongside an iceberg, which had drifted into the harbour. They broke a large quantity of ice off it for the ship's ice-house.

TUESDAY, 29th July, 1890.

At daylight the wind had moderated and the vessel proceeded towards Belle Isle. Mr. Anderson had sent instructions to the lighthouse keeper at Cape Bauld to sound the horn as we passed the cape, which was accordingly done.

4.50 a.m.—Reached Belle Isle, and Mr. Anderson went on shore with the secretary immediately after coming to anchor in order to superintend the testing of the upper and lower guns with different kinds of powder, with wads and without wads, also to make a trial with the Cotton Powder Company's socket signal. After these tests, steamed round the island to examine the N. E. point relative to its suitability for a light or fog-signal station. The wind was now blowing strong from the W. S. W. with a choppy sea. Numerous icebergs were scattered all round the island. Some of immense size were aground upon the N. E. reef. As we proceeded to the west of the island, we saw some icebergs two or three miles long, and counted 65 as we were running along the shore.

Passed close to Lark Island, on the west coast of Belle Isle, about four miles from the N. E. point. Fifteen schooners were at anchor there in an apparently well sheltered harbour. Our course was now directed towards Cape Norman and after passing the S. W. point of the island, we sighted numerous large and fantastic bergs, some of them of immense size. As far as the eye could reach towards the coast of Labrador, the whole sea was studded with these masses of ice, some of them long and low, others rising to a great height above the surface of the water.

2 p.m.—Reached Cape Norman on the return trip, landed and found the frame of the fog-horn building erected and everything prepared to have the horn in operation at the end of a week. The carpenters were left on shore to finish the work, and will be taken up in October when the "Napoleon" makes her last trip down the Gulf. H. M. S. "Emerald" passed up the Strait about 6 o'clock, steaming slow. We

left shortly after with the intention of calling at Forteau Bay, but when a short distance off Point Amour, the weather became foggy and the idea was abandoned.

WEDNESDAY, 30th July.

4.30 a.m.—Reached Greenly Island in a fog, very little wind and calm sea. Anchored the vessel about $1\frac{1}{2}$ miles off the island, landed and tried the fog-horn again, and arranged for further tests after leaving for the Newfoundland coast. We took the former lightkeeper on board. At noon left the island in a dense fog. It cleared at 2 p.m., and we proceeded towards Point Rich, but on account of the wind increasing from the W. S. W. which created a heavy sea; on arriving there, landing was found impracticable, and the vessel steamed to Port Saunders for shelter. Here we found H. M. S. "Pelican" and a torpedo boat at anchor, also two French men-of-war, "La Perouse," and "Indres." In this harbour we were surprised to find the temperature of the atmosphere was 66° in the shade and 71° in the sun, and the surface water 60° .

THURSDAY 31st. July.

4. a.m.—Left Port Saunders; the wind, which had moderated during the night, had changed to south-west.

4.40 a.m.—The vessel anchored to the north-west of the light-house, and we landed upon a rocky shore, part of an extensive ledge of limestone formation. Landed the supplies and took off the keeper. While we were on shore the wind freshened and the sea became heavy again, which made it difficult to embark in the boat, as the surf was breaking on the rocks. The barometer fell fast and the wind now hauled to south-west.

7.30 a.m.—Proceeded towards the Labrador coast, in order to visit the Murr Islands to see if a good site could be found on which to erect a lighthouse. Dense fog came on soon after leaving the coast, and remained until 11.30, when a slight clearance was observed. Land was then sighted, and we came up to a small island, rocky and barren, but the Master being uncertain as to what land it was and the fog continuing, late in the afternoon the vessel's head was directed for the coast of Newfoundland with the intention of going to Cape Ray. The fog kept up all day, but towards 10 o'clock, p.m., clouds began to form, the moon shone out, indicating a change, but soon the vessel was again enveloped in a fog more dense than ever, which kept up until past midnight.

FRIDAY, 1st August.

2.30 a.m.—The fog commenced to roll up into long banks of clouds and soon under the influence of a brisk westerly wind, it cleared up entirely. A heavy swell from the westward had made during the night, and the vessel pitched and rolled in an uncomfortable manner.

7.30 a.m.—Cape George was in sight, and at 10 a.m. we passed Cape Anguille.

Noon.—At noon the prominent conical headland near Cape Ray came in sight.

1.00 p.m.—We passed the lighthouse and anchored in a bay to the eastward at 1.15 p.m. Landed supplies and inspected the station. Both fog-horns were put in operation when leaving, but the wind being from the west we did not hear them at any great distance.

SATURDAY, 2nd August.

Reached Entry Island (Magdalen Group) shortly after daylight, went ashore and visited the lighthouse. We met Bishop Williams, of Quebec, upon his annual tour.

8.20 a.m.—Inspected stations and left for Amherst Island; fine weather and smooth water. At noon we found the temperature of the air on shore 70° and in the sun 100° . The temperature of water near the shore was 66° . While the vessel was at anchor we were surrounded with Medusae. These "Jelly-fish" were in countless numbers, and showed most brilliant colouring, and some of them were brought on board. We observed several of them with tentacles that

were 2 feet in length. On the shore near Amherst Island we found one or two varieties of sponges.

We next visited Etang du Nord, inspected the lighthouse and took on board the steam fog-whistle and machinery connected with it, which kept the crew at work until midnight.

SUNDAY, 3rd August.

Left our anchorage early this morning and passed round Deadman Island at 7.45 a.m., and afterwards directed our course towards the east point of Prince Edward Island, where we arrived at 11.45 a.m.

Inspected the fog-alarm station, and had one horn put in operation, and sounded while we were *en route* to Pictou. It was heard some distance off. The vessel reached Pictou in the evening, having made a distance of 1,660 miles since leaving Quebec. We left the vessel here and proceeded to Halifax.

APPENDIX E.

TABULAR STATEMENT of Temperatures of Water and Air, Barometric Pressure, and Magnetic Variations at various River and Gulf Stations.

TEMPERATURE of the Atmosphere and Surface Water, with the variation of the Compass and height of Barometer at different Stations on the Gulf of St. Lawrence

Date.	Place.	Time of Arrival.	Time of Observation.	AIR.		WATER.		Barometer.	Variation.	Wind.	Weather.	DISTANCE RAN.		Remarks.
				Sun.	Shade	Ship.	Near Shore					Miles.	Total Miles.	
July 10.	Bellechasse	6.45 p.m.	6.45 p.m.	..	54	..	..	..	18.35	Easterly.	Variable.	21	..	..
do 10.	Crane Island	9.00 p.m.	9.00 p.m.	..	52	..	..	..	..	do	do	11	..	..
do 11.	Brandy Pots	4.00 a.m.	4.00 a.m.	..	51	54	..	..	20.35	Calm.	Fine.	63	..	..
do 11.	Lark Island	8.00 a.m.	8.00 a.m.	..	54	51	..	30.11	21.10	Variable.	do	13	..	..
do 11.	Portneuf	2.00 p.m.	2.00 p.m.	..	56	54	..	30.12	22.25	Light west.	do	40	..	..
do 11.	Bicquette	5.00 p.m.	5.00 p.m.	..	57	55	..	30.10	22.30	do	do	15	..	..
do 11.	Father Point	8.50 p.m.	8.50 p.m.	..	57	56	54	..	..	Westerly.	do	69	..	..
do 12.	Cape Chatte	5.15 a.m.	5.15 a.m.	..	54	53	..	30.09	25.35	W. S. W.	do	76	..	..
do 12.	Point Chatte	9.00 a.m.	9.00 a.m.	..	56	54	..	..	25.40	Westerly.	do	5	..	..
do 12.	Point St. Anne	10.00 a.m.	10.00 a.m.	..	59	56	55	..	25.50	do	do	4	..	..
do 12.	Cape Magdalen	4.00 p.m.	4.00 p.m.	..	64	58	..	30.13	26.55	Moderate W.	do	51	..	..
do 13.	Perruquets	3.30 a.m.	3.30 a.m.	..	46	41	40	30.15	..	N. W.	do	74	..	..
do 13.	W. Pt. Anticosti	8.00 a.m.	8.00 a.m.	70	62	53	54	30.13	27.45	S. W. by S.	do	26	..	..
do 13.	S. W. Pt. do	3.45 p.m.	3.45 p.m.	73	65	52	53	30.10	28.00	Moderate W.	do	49	..	..
do 14.	South Pt. do	3.30 a.m.	3.30 a.m.	..	51	51	56	30.00	None.	S. W. strong.	Cloudy.	57	..	..
do 14.	Heath Point	0.09 a.m.	9.00 a.m.	70	56	51	56	Falling. 29.96	28.55	Stiff breeze S. by S.	do	24	..	..
do 14.	do do	do	Noon	75	58	..	55	29.92	..	do	do	..	..	..
do 14.	do do	do	2.00 p.m.	76	60	..	56	29.87	..	do	do	..	..	..
do 15.	Bird Rocks	3.00 a.m.	3.00 a.m.	..	53	57	..	29.70	28.00	S. westerly.	Fine.	78	..	..
do 15.	do do	do	Noon	72	60	58	..	..	..	do	do	..	..	..
do 15.	do do	do	5.00 p.m.	69	65	59	..	..	..	do	do	..	..	..
do 16.	do do	do	Noon	74	65	58	..	29.85	..	N. W.	Fog to 9 a.m.	..	..	..
do 17.	Off George's Bay, Nfld.	Noon	do . . . . .	..	62	..	..	29.90	..	Westerly.	Fine.	..	..	..
do 18.	Greenly Island	8.00 a.m.	9.00 a.m.	..	53	49	..	29.70	35.20	Easterly light.	Heavy rain	260	..	..
do 18.	Porteau Bay	3.40 p.m.	5.50 p.m.	..	55	49	..	29.72	35.40	Westerly do	Clearing.	14	..	..

APPENDIX E.—Tabular Statement of Temperature of Water and Air, Barometric Pressure, and Magnetic Variations, &c.—*Con.*

Date.	Place.	Time of Arrival.	Time of Observation.	AIR.		WATER.		Barometer.	Variation.	Wind.	Weather.	DISTANCE RUN,		Remarks.
				Sun.	Shade	Ship.	Near Shore					Miles.	Total Miles.	
July 18.	Cape Norman.	Midnight.						29.90	36.45	Westerly.	Clear.	38		
do 19 to 23	do		10 am. 19th.					Rising. 30.05	36.50			19		
do 24	Cape Bauld.	3.30 a.m.			49	42			37.00	W. N. W.		14		Passed several ice-bergs.
do 24.	Quirpon							Falling.				3		
do 25.	Belle Isle.	7.30 a.m.	7.30 a.m.		55	34		30.19	37.30	Westerly.	Fine.	19		Clear; many ice-bergs about.
do 26.	do	do	Noon		64	37		30.00		S. easterly.	Foggy.			
do 27.	do	do	do		60	35		29.47		S. W.	do			
do 28.	Quirpon.	2.00 p.m.	2.00 p.m.		56	54		29.50	36.55	West.	Clear.	18		
do 29.	Belle Isle.	10.00 a.m.	10.00 a.m.		54	36		29.64	37.30	W. S. W.	do	18		Round the island and to Cape Norman; thence to Greenly Island.
do 29.	Cape Norman.	3.00 p.m.	3.00 p.m.											
do 30.	Greenly Island.	5.00 a.m.	7.00 a.m.		48	44		29.75	35.25	Calm.	Foggy.	43		
do 30.	Port Saunders.		5.00 p.m.	71	66	60		29.64	34.20	West.	Stiff breeze.	52		
do 31.	Point Rich.	Noon	6.00 a.m.		56	59.5		29.54		W. S. M.	Fog at 7.30	6		
do 31.	Off Murr Rocks.	Noon	Noon		54	42		29.45		S. W. by W.		51		
Aug. 1.	Off St. George Bay.	do	do		56	50		29.70		West strong	Fine.			
do 1.	Off Cape Ray.	1.00 p.m.	1.00 p.m.	64	58	50			29.10	West mod.	do	204		
do 2.	Entry Island.		5.00 a.m.		66	62		29.90	27.00	W. N. W.	do	100		
do 2.	Amherst Island.		11.00 a.m.	100	76	66	68	29.95	26.35	West.	do	15		
do 2.	Etang-du-Nord.		6.00 p.m.	89	65	64		30.00	26.50	W. S. W.		12		
do 3.	Dead Man's Island.	7.30 a.m.						30.01		S. W. by S.		13		
do 3.	P. E. I., East Point.	Noon	Noon	74	68	66		30.05	25.45	S. W.		50		
do 3.	Pictou.	7.00 p.m.										56		

APPENDIX No. 12.

REPORT OF THE SUPERINTENDENT OF GOVERNMENT RIVER POLICE
AT THE PORT OF QUEBEC FOR THE SEASON 1890.

QUEBEC, July, 1890.

This force, consisting of twenty men, exclusive of the Superintendent, who is also the Agent of the Department of Marine and Shipping Master, was sworn in for duty as the requirements of the shipping necessitated.

The acting chief, four coxswains and nine constables and engineer took their oaths of office on the 1st day of May, 1890. Five other constables were sworn in on the 8th of the same month. On the 31st of July one constable in good standing left the force, and it was not considered necessary for the efficiency of the service to replace him, thus reducing the number to one acting chief, four coxswains, one engineer and thirteen constables.

The steam launch "Dolphin" patrolled the harbour, amongst the shipping, twice daily, and rendered such other services as was called for. There are also two gigs kept afloat to perform any urgent duty required during the absence of the steam launch, and when so employed are manned by one coxswain and six constables.

In the early part of the season a large number of sailing vessels and steamers came into the harbour, and the force was actively employed; but owing to unforeseen disturbance in the timber export trade the volume of shipping did not continue and the duties became gradually less till the end of the season. Yet, crimping was carried on to a very considerable extent, and the efforts of the Force were directed towards its suppression. I cannot see how a stop can be put to the acts of crimps unless the shipping will come to an agreement not to employ well-known characters to supply them with seamen to replace deserters. Often the same crimp supplies a vessel he has taken seamen from by the men he has probably induced to desert from another which has just left the port, and by such means keeps up his nefarious trade.

The river police force is called upon to remedy an evil due to a bad system. Such has ever been the difficulty connected with the shipping of this port, causing a much larger expenditure in maintaining a force than the revenues from police dues, to the best of my knowledge, ever amounted to. It has been the aim of the Department to keep the expenditure of this service within the limits of the revenue collected from the shipping for that purpose, and the reduction in number has been in keeping with the falling off of the shipping, and consequently of that fund.

The expenditure and revenue for River Police Service, for the past four fiscal years ending on the 30th June was as follows:—

	Expenditure.	Revenue.	Deficit.
1887	\$22,812 24	.....	.....
1888	17,989 51	.....	.....
1889	14,694 80	.....	.....
1890	8,627 61	.....	.....

From the opening to the close of navigation the following duties were performed:—

	Number.
Arrest of deserters.....	17
Arrests for absence without leave	20
do refusal of duty	17
do cutting and wounding.....	1
do breaking into dwelling (arrested on board vessels).	6
do assaults on ships' officers do do	3
do do seamen do do	8
do stealing clothing from ship do do	1
Conveyance of witnesses to court (from on board vessels)....	15
do witnesses on board (returned on board vessels)	12
do seamen from gaol on board (to prevent them falling into the hands of crimps).....	35
do distressed seamen on board the steamship in the stream outwards bound (to prevent them falling into the hands of crimps).....	65
Recovery of pieces of timber stolen or lost while on patrol..	12
do boat while on patrol	1

Weekly reports of each day's acts by the Force, and the movements of the steam launch and boats, persons carried on them, patrolling making arrests, conveying prisoners to and from the courthouse and gaol, &c., to prevent seamen falling into the hands of crimps, have been regularly forwarded to the Department at Ottawa. On the 13th of November, having been instructed to discharge all the men not actually required, as there were few sea-going vessels in the harbour, and crimping for the season about over, I carried out the orders received and discharged thirteen constables, retaining only the five officers and engineer to maintain order with the aid of the steam launch, until the close of navigation.

I would beg to add that upon the urgent request of the shipping, the Hon. the Minister of Marine relaxed some of the strict orders he gave, and the Force consequently performed services he considered should not be called for.

I have much pleasure in stating that owing to the remarkably good conduct of the entire Force is due the efficiency with which the duties have been performed, which, when the greater number of vessels were in port, were onerous, night and day.

The acting chief and four coxswains were discharged on the 30th November, when the Force was finally disbanded. The last ocean-bound vessel left on 27th and last inwards from the sea was on the night of 28th November.

I have the honour to be, Sir,

Your obedient servant,

J. U. GREGORY,

Agent Dept. of Marine and Supt. Quebec River Police.

APPENDIX No. 13.

CORRESPONDENCE WITH BOARD OF TRADE, QUEBEC, *RE* RIVER POLICE.OFFICE OF THE QUEBEC BOARD OF TRADE,
QUEBEC, 7th May, 1890.Hon. C. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I am directed by the President and members of the Council of the Quebec Board of Trade to express their feelings of regret at the decision taken by your Department as to the reduction of the Quebec River Police Force from twenty to fifteen men.

That departure is much to be regretted as at this very moment the fleet of sailing vessels inwards bound for Quebec doubles that of the spring of 1889, when even a squad of twenty policemen was considered scarcely sufficient for an inspecting circuit of twenty miles, embracing both sides of the river, and being the area of the loading ground in the Harbour of Quebec.

Therefore, hopes are entertained by the Council that, the above reasons being fully considered, your Department will readily see the great necessity of issuing immediate orders for an increase of our River Police Force to its usual numerical strength at least.

I have the honour to be, Sir,
Your most obedient servant,
N. LEVASSEUR,
Secretary.

WASHINGTON, 12th May, 1890.

SIR,—Mr. Tupper desires me to acknowledge your communication of the 7th instant with reference to the constitution of the River Police Force at Quebec, and to say that he will write to your Board fully on the subject so soon as he returns to Ottawa.

In the meanwhile, I am by direction to point out that it has never been his intention to reduce the Force, so long as the Federal Government is charged with its maintenance, below an efficient number.

The Minister would be glad, although he is of an entirely different opinion from the Board of Trade, after having given the subject careful attention, to learn the special reasons which induce the Board to consider that a squad of fifteen men, or even of twenty men, is scarcely sufficient for the inspection circuit. With regard to this, I am also to remind you that in the days when "crimping" was at its height and the tonnage entering and clearing at the Port of Quebec was double that at the present time, the Force maintained comprised but twenty men, and no steam launch was available for the use of the Force.

I have the honour to be, Sir,
Your obedient servant,
C. C. CHIPMAN.

N. LEVASSEUR, Esq.,
Secretary Board of Trade,
Quebec.

DEPARTMENT OF MARINE,
OTTAWA, 25th June, 1890.

SIR,—Referring to your letter of the 7th ultimo, calling attention to the matter of reduction in the Quebec River Police Force, and the reply made on the 12th of May by Mr. Chipman, I am desired by the Minister of Marine and Fisheries to state that he has been expecting the favour of a reply to Mr. Chipman's letter, giving the information desired, and will feel obliged by the Board of Trade giving their attention to the matter.

I have the honour to be, Sir,

Your most obedient servant,

JOHN HARDIE,

Acting Deputy Minister of Marine.

N. LEVASSEUR, Esq.,
Secretary Board of Trade,
Quebec.

OFFICE OF THE QUEBEC BOARD OF TRADE,
QUEBEC, 10th July, 1890.

Hon. C. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I am desired by the Council of the Quebec Board of Trade to express their sincere regrets at their not having yet been in a position to reply to your favour of the 12th May, and that especially of the 25th June, with regard to the reduction of the Rivêr Police Force at Quebec. One reason of the delay is that you were expected by the Council to write fully on the matter on your return from Washington to Ottawa. Another reason is, that this being the busiest time of the year for the trade generally it is very difficult for the Council to meet regularly.

On behalf of the Council, I beg leave to state the following as the reasons why, in their opinion, a squad of fifteen or twenty men was not sufficient last spring, and is scarcely sufficient for the usual inspection circuit and cases of emergency.

That circuit, extending from New Liverpool above to Indian Cove, below Quebec, covers an area of about twenty miles, embracing both shores, bays, basins, coves, &c., and the jurisdiction district of the Force extends from Portneuf, above, to Barnabé Island, below Quebec.

This last spring the fleet reported inwards from sea numbered more than 120 ships at the very opening of navigation—that is to say, that of 1889, for the same period.

It is very true that when crimping was at its height and the tonnage entering and clearing at the port of Quebec was double that of the present time, the Force maintained comprised but twenty men, and no steam launch was available for the use of the Force; and the only mention of that fact is sufficient to prove that the Force was then inadequate to the requirements.

Later on, when the Force was brought up to twenty-five men, and provided with a steam launch, even then, under the command of able and energetic chiefs, it met with extraordinary difficulties in endeavouring to keep down crimping, prevent murders, murderous assaults and all sorts of abuses. The men were kept nearly the whole time on duty.

Now the Force consists of twenty men, ten remaining on duty for twenty-four hours, five on the river and five at the station, being ready for any emergency.

In the opinion of the Council, such a squad is rather small for the patrolling ground and the jurisdiction circuit above mentioned, and would prove quite inefficient in any case of emergency which might occur at any moment on the river or on one shore or the other.

I have the honour to be, Sir,

Your obedient servant,

N. LEVASSEUR,

Secretary.

DEPARTMENT OF MARINE, OTTAWA, 16th July, 1889.

SIR,—I am desired by the Minister of Marine and Fisheries to acknowledge receipt of your letter of the 10th instant.

He is glad to observe from your delay in dealing with the subject that it is not so serious as he at first supposed your Board considered it to be.

It is quite true that the Minister's Secretary informed you in March that the Minister would deal with the communication of the Board more fully on his return from Washington, but I may call your attention to his request that meanwhile your Board might furnish him with any special reasons which led it to make so emphatic a complaint against a proposed reduction of the regular force of the River Police.

A careful investigation into the actual work done by this Force led the Minister to the conclusion that a much larger number of men were employed than were required.

From personal inspection of the record of the season's work, together with a personal inspection of the duties required, he was led to this conclusion.

Finding, further, that the receipts from the tax on shipping did not meet the expenditure as originally intended, he believed it all the more to be his duty to bring the expenditure down to the lowest point consistent with efficiency in the performance of the duties of the force.

The Minister is personally of the opinion that the shipping at the port of Quebec would be much benefited by the abolition of the tax, if Quebec were willing to support the police for the protection of the shipping, as is done in Montreal, Halifax, St. John and all other ports in Canada.

This, however, is for the people of Quebec city to decide. There is, however, no reason to ask the people of other cities to contribute to the expenditure for this purpose to Quebec while supporting their own police without Federal assistance.

The Minister is glad to be able to say that it can be shown that no reasonable grounds exist for challenging the propriety of the policy of the Department to keep, as it is endeavouring to do, within the amount received from the tax levied on ships arriving at the port of Quebec.

It will be seen that the expenditure, both at Montreal and Quebec, outran in past days these receipts, when I call attention to the following figures taken from the Marine reports.—

STATEMENT of Receipts and Expenditure on account of the Harbour Police at Quebec and Montreal, from the 1st of July, 1869, to the 30th of June, 1889.

			Receipts.	Expenditure.
			\$ cts.	\$ cts.
For fiscal year ended 30th June, 1870.....			23,996 68	18,461 83
do do 1871.....			21,235 06	17,400 73
do do 1872.....			27,215 80	20,348 00
do do 1873.....			26,618 50	32,653 87
do do 1874.....			28,650 39	38,897 52
do do 1875.....			25,620 09	37,895 00
do do 1876.....			26,499 09	41,222 68
do do 1877.....			28,598 10	35,006 37
do do 1878.....			26,702 43	37,560 14
do do 1879.....			21,464 97	36,486 50
do do 1880.....			21,510 15	35,225 54
do do 1881.....			27,375 09	35,451 07
do do 1882.....			21,420 33	42,316 56
do do 1883.....			28,060 02	38,318 65
do do 1884.....			28,497 25	41,980 72
do do 1885.....			20,698 79	38,082 92
do do 1886.....			24,089 97	43,916 57
do do 1887.....			22,934 46	40,349 12
do do 1888.....			21,072 73	37,279 52
do do 1889.....			19,688 27	31,647 50
Deduct receipts from expenditure.....			491,948 17	700,500 81
Excess of expenditure over receipts.....				491,948 17
				208,552 64

From information gathered on the direction of the Minister as to the practice which obtains in dealing with this subject in certain great ports, it will be seen that if the Department errs at all it errs on the side of extravagance in maintaining a larger force than is required.

No record is kept of vessels arriving and departing coastwise and inland at United States ports. In the comparison below this tonnage is omitted in the case of Quebec for purpose of comparison.

Port.	Tons. Entered.	Tons. Cleared.
New York	6,312,479	5,980,902
Boston	1,424,246	1,256,270
Quebec	511,464	462,828

Now, it is to be observed that in Boston the Police Force numbers twenty men to look after the shipping interests just referred to. The number on board the launch at any time is the same as we have on the launch in Quebec.

In New York with its vast shipping and great water area, the number of patrol men is but thirty. The jurisdiction of the Harbour Police Force extends through the upper and lower bays on either river to the northern boundary of the city and to low water on the Brooklyn, Long Island, Staten Island and New Jersey shores.

The length of the circuit for patrol at Quebec does not affect the number of the crew or force on the launch, as your letter suggests.

Your other point is not well taken, in the opinion of the Minister, since the adoption of a launch did not render a larger force necessary when the change from row-boats to a launch was made.

The Department was not called upon by local authorities to obtain the launch nor to increase the Force at the time referred to.

The large number of men added to the Force were employed in work not called for from Marine Police, such as guarding and protecting property in the city, and not in the harbour at all. The examination of the records alluded to above brought out these facts, and this work Parliament has never sanctioned.

Your allusion to special emergencies can be met by saying that these will be dealt with as they arise, as in the case of civic police forces.

The Minister, under the circumstances trusts that the Council, on re-consideration, will admit that no ground exists for carrying out their request to increase the Force to twice the number, which is now so satisfactorily performing the duties of a River Police in Quebec.

I have the honour to be, Sir,

Your obedient servant,

JOHN HARDIE,

Acting Deputy Minister of Marine.

N. LEVASSEUR, Esq.,
Secretary Board of Trade,
Quebec.

OFFICE OF THE QUEBEC BOARD OF TRADE,

QUEBEC, 16th December, 1890.

Hon. C. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

Sir,—In reply to your communication, No. 4077, dated 16th July last, the Council of the Quebec Board of Trade desire me to give the reasons why a protest was made on their part against the reduction of the Police Force of the port. An increase in the number of ships to arrive was anticipated.

The decline in number of the ships visiting the port may have led the Hon. Minister of Marine and Fisheries to suppose that a lesser River Police Force was

sufficient. In the present case, this, in the opinion of the Council, is not a right ground for a reduction of the Force, as the vessels loading are scattered at the extreme limits of the harbour, frequently entailing on your Police Force the necessity of making frequent circuits at distances of about 12 miles, whether the vessels are few or many.

As to the suggestion that the city should bear the cost of the River Police Force, if would no doubt benefit the shipping interests were the tax at present imposed on shipping removed.

What would apply to Montreal does not apply to Quebec.

In Montreal the accommodation provided for shipping is the property of the Dominion, while here, in Quebec, it is owned by private individuals.

The Council do not consider that it is always advisable in public matters to have expenditure not exceed receipts.

The Harbour of Quebec being so large, and only capable of being visited by using the water-ways, it must necessarily be more expensive than at Montreal, where, in a few moments, a Police Force can be transferred to any point.

The Council express their thanks to you for the very exhaustive statement which was furnished them in connection with this matter.

I have the honour to be, Sir,

Your obedient servant,

N. LEVASSEUR,

Secretary.

DEPARTMENT OF MARINE,

OTTAWA, 22nd December, 1890.

SIR,—I am desirous to acknowledge receipt of your letter of the 16th instant. The Minister of Marine was much pleased to observe that the result of the past season's work of the Police Force at Quebec was such as to justify him in the reduction he made in the numerical strength of the Force, and he notices with pleasure, after his explanation to your Board, that the Board apparently perceives he has not in any way neglected the shipping interests of the Port of Quebec.

I have the honour to be, Sir,

Your obedient servant,

WM. SMITH,

Deputy Minister of Marine.

M. LEVASSEUR, Esq.,
Secretary Board of Trade,
Quebec.

APPENDIX No. 14.

REPORT OF THE COMMITTEE OF THE INTERNATIONAL MARINE CONFERENCE UPON THE SUBJECT OF A UNIFORM LOAD-MARK.

DRAFT TO WHICH VESSELS SHOULD BE RESTRICTED WHEN LOADED.

Uniform Maximum Load-mark.

WASHINGTON, 26th November, 1889.

To Rear Admiral S. R. FRANKLIN,

President of the International Marine Conference, &c.

SIR,—Your committee having been appointed to report on the subject of a uniform load-mark have first of all endeavoured to obtain as much information as could be collected on this very important question.

The British law as laid down in the Merchant Shipping Act, 1876 (39 and 40 Vic. c. 80) gives certain powers to the Board of Trade to detain British and foreign vessels which, by reason of overloading or improper loading, are unfit to proceed to sea without serious danger to human life. These powers may be put into force against foreign ships when they have taken on board all or any part of their cargo at a port in the United Kingdom, and are, whilst at that port, unsafe by reason of overloading or improper loading.

With the intention of carrying out this law in a way consistent with the interests of the mercantile community on the one side and with the regard due to protection of life and property on the other side, certain general rules after careful investigations instituted by a load-line committee appointed by the President of the Board of Trade, as well as by the Board of Trade, have been framed with the purpose of ascertaining whether a ship be overloaded or not. These rules assign to ships a freeboard, which, according to the experience collected on the subject, is considered sufficient to prevent dangerous overloading without unduly interfering with trade, and they contain tables assigning such freeboard as is suitable for vessels of the highest class in Lloyd's register or of strength equivalent thereto, and which is to be increased for ships of inferior strength.

The above mentioned rules have proved to be a good standard upon which to determine the proper loading of British vessels, which are classed in Lloyd's register, or for other vessels the particulars of whose strength and fitness to carry any particular cargo can easily be ascertained by the surveyors of the Board of Trade.

As regards foreign ships, however, which are loading in the United Kingdom, and which are either not classed in Lloyd's register, or the particulars of which cannot be ascertained without a minute examination, the difficulty exists that the law which intends to guard against the dangers arising from overloading cannot be enforced without serious disadvantages to the owners of ships and cargoes, consequent upon the difficulty of ascertaining whether the ships are fit to carry the cargo in question.

For these reasons it appears to be obvious that it would be very desirable if means could be found to ascertain in a simple and easy way, and without loss of time, the fitness of any vessel loading in a port of the United Kingdom to load a particular cargo.

These remarks naturally apply also to vessels loading elsewhere, because it is a very high and important interest, common to all nations, to take every possible

measure for the protection of life and property against the dangers arising from overloading.

For these reasons it appears to deserve very serious attention whether by providing for a certain load-line to be marked on sea-going ships a trustworthy and simple method could be arrived at for deciding whether a loading vessel should be detained for overloading or ought to be allowed to go to sea.

The British Government has recently invited the attention of other Governments to this question. But inasmuch as up to the present no progress has been made in this matter, the question arises whether something could be done to expedite an understanding by any action on the part of the conference now here assembled.

Now, as far as your committee have been able to ascertain, the laws of many maritime nations contain provisos for dealing with the question of overloading and enabling the local authorities to detain overladen ships. But nowhere, except in Great Britain, so far as is known, have statutory rules being introduced for the purpose of ascertaining whether a ship be fit to carry a certain cargo by a load-mark or load-line.

In order to arrive at such laws and to enforce them, it would appear to be necessary to induce the Governments of the maritime nations not only to institute investigations similar to those made in Great Britain above referred to, but also to establish a sufficient staff of competent officials to insure the universal compliance with the laws to be given, and to establish courts of appeal authorized to decide on complaints against unjust detention and to award damages to the ship-owners and shippers in case of an unjustifiable detention.

It appears to your committee that this would be surrounded with very serious difficulties, as it depends upon the varying conditions of each country whether the Governments would think it advisable to take steps in this direction or not. It must be kept in mind that a great display of scientific labour, and moreover a heavy expenditure of money, would be necessary to introduce a system similar to that which is used in Great Britain. Besides, it could be questioned whether it be necessary to make a law on load-lines or load-marks in order to guard against the danger of overloading, because it might be said that sufficient safeguards are given by the responsibility of the shipowners towards the shippers of the cargo, and to their insurers, and by the control exercised by the underwriters and the various institutions for classing ships. There may also be circumstances peculiar to certain countries, as, for example, the fact that the goods which they export generally are light goods only, which do not endanger the stability of a ship, which may operate in favour of non-interference on behalf of the respective Governments.

Your committee are led to believe that on these grounds, notwithstanding the advantages which would be connected with the introduction of a uniform system of load-marks, this matter is not ripe for consideration by this conference and that it, ought to be left to the negotiations to be carried on between the Governments of the maritime nations.

We beg to remark, in concluding, that this report has been sanctioned by the undersigned members of your committee unanimously, and that Mr. Thomas Gray, who has been prevented from reading and signing it by the necessity of his departure, has nevertheless expressed his concurrence with its general views.

(Signed)

SIEVEKING,

Chairman of Committee.

“

J. MAURITY,

“

R. BAUGENCY,

“

CHIA. NI. HSI,

“

E. RICHARD,

“

R. SETTEMBRINI,

“

D. HUBERT,

“

CLEMENT A. GRISCOM.

APPENDIX No. 15.

CHAPTER 9.

An Act to amend the Merchant Shipping Acts relating to Load-line.

19th June, 1890.

Be it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

1. The Merchant Shipping Act, 1876, shall, from and after the expiration of six months after the passing of this Act, be construed as if in the twenty-six and twenty-seventh sections thereof the following sub-section were inserted instead of the sub-sections numbered (2) in those sections respectively :

"(2.) The centre of this disc shall be placed at such level below the deck-line marked under the provisions of this Act as may be approved by the Board of Trade, and shall indicate the maximum load-line in salt water to which it shall be lawful to load the ship."

Provided, that the position of the disc shall be fixed in accordance with the tables framed by the Load-line Committee appointed before the passing of this Act, subject to such allowance as may be made necessary by any difference between the position of the deck-line marked under the provisions of the Merchant Shipping Act, 1876, and the position of the line from which freeboard is measured under the said tables, and subject also to such modifications, if any, of the tables and the application thereof, as may from time to time be sanctioned by the Board of Trade.

In sanctioning any such modifications the Board of Trade shall have regard to any representations which may be made to them by any corporation or association for the survey or registry of shipping for the time appointed or approved by the Board of Trade for the purposes of this Act.

2.—(1.) The Board of Trade shall appoint the Committee of Lloyd's Register of British and Foreign Shipping, or, at the option of the owner of the ship, any other corporation or association for the survey or registry of shipping, approved by the Board of Trade, or any officer of the Board of Trade specially selected by the Board for that purpose, to approve and certify on their behalf from time to time the position of any such disc as aforesaid, and any alteration thereof, and may appoint fees to be taken in respect of any such approval or certificate.

(2.) The Board of Trade may make regulations—

- (a) determining the lines or marks to be used in connection with the disc, in order to indicate the maximum load-line under different circumstances and at different seasons, and declaring that the provisions of the Merchant Shipping Act, 1876, are to have effect as if any such line were drawn through the centre of the disc;
- (b) as to the mode in which the disc and the lines of marks to be used in connection therewith are to be marked or affixed on the ship, whether by painting, cutting, or otherwise;

Compulsory marking of load-line.
39 & 40 Vict. c. 80.
Regulations. Provision as to colonial ships.
Provision as to foreign ships.
Definition of "amidships."
Short title.

(c) as to the mode of application for, and form of certificates under this Act; and

(d) requiring the entry of such certificates, and other particulars as to the draught of water and freeboard of the ship, in the official log-book of the ship, or other publication thereof on board the ship, and as to delivering copies of such entries.

All such regulations shall, while in force, have effect as if enacted by this Act.

3. Where the Legislature of any British possession by any enactment provides for the fixing, marking and certifying of load-lines on ships registered in that possession, and it appears to Her Majesty the Queen that the provisions of that enactment are based on the same principles as the provisions of this Act, and are equally effective for ascertaining and determining the maximum load-lines to which such ships can be safely loaded in salt water, and for giving notice of the load-line to persons interested, it shall be lawful for Her Majesty, by Order in Council, to declare that any load-line fixed and marked and any certificate given in pursuance of that enactment shall, with respect to ships so registered, have the same effect as if it had been fixed, marked or given in pursuance of this Act.

Sections one and two of this Act shall not apply in the case of a ship registered in a British possession until the expiration of twelve months after the passing of this Act.

4. Where the Board of Trade certify that the laws and regulations for the time being in force in any foreign state with respect to overloading and improper loading are equally effective with the provisions of the Merchant Shipping Acts with respect thereto, it shall be lawful for Her Majesty, by Order in Council, to direct that, on proof of a ship of that state having complied with those laws and regulations, she shall not, when in a port of the United Kingdom, be liable to detention for non-compliance with the said provisions of the Merchant Shipping Acts, nor shall there arise any any liability to penalty which would otherwise arise, for non-compliance with those provisions.

Provided that this section shall not apply in the case of ships of any foreign country in which it appears to Her Majesty that corresponding provisions are not extended to British ships.

5. For the purposes of the Merchant Shipping Act, 1876, as amended by this Act, the expression "amidships" shall mean the middle of the length of the load water-line as measured from the fore side of the stem to the aft side of the stern-post.

6. This Act may be cited as the Merchant Shipping Act, 1890.

APPENDIX No. 16.

REPORT ON TIDAL WORK.

TORONTO, December, 1890.

Hon. CHARLES H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to report on the tidal work during the past year as follows:—

In the spring correspondence was carried on with the British Admiralty Hydrographic Office, and also with the Superintendent of the Coast and Geodetic Survey of the United States, with reference to the best way of carrying on tidal observations. In the early summer three Thompson tide gauges were ordered from J. White, of Glasgow, together with an aneroid barograph for keeping a continuous record of the height of the barometer. These gauges, however, had not been received up to the time of the close of navigation on the St. Lawrence, so that they will not be in operation till next year.

Acting on the recommendation of Prof. T. C. Mendenhall, of the United States Coast and Geodetic Survey, one Stierle gauge was purchased from Hugh Bilgram, of Philadelphia, and was, as reported by Lieut. Gordon, placed in operation at Liscomb. The gauge was in one respect defective, or the proper management of it was not understood by the observer; for, during a large portion of the time that it was in operation the pointers, which should punch holes in the paper at each hour, and should likewise ensure against any slipping, have failed to mark the paper. The record shows a good deal of pulsatory motion, similar to that noticed at some of the Indian stations, due to oscillations of the water within the harbour, and which are not true tidal movements. Lieut. Gordon's report is appended.

Acting on your instructions, I left Toronto on 16th September to visit various stations on the Lower St. Lawrence, with a view to ascertaining their suitability for tidal observations. The first place visited was Father Point. About 800 feet north-east from the lighthouse there is a rock, the bottom of which is never uncovered and the top never covered. Mr. Anderson, engineer of the Department, with whom I consulted, was, however, of the opinion that the cost of constructing an approach to this point, so as to make it accessible during stormy weather, would be excessive. The only other way which, in my opinion, is practicable at this station, would be to sink a well, within which the tide gauge box would be inserted, a few yards to the north of the flagstaff, and connected by about 270 feet of siphon pipe with the sea, at a point where there is a gap in the rocks immediately over deep water. The pipe would have to be sunk so as to protect it from frost when the tide was low. It would, as explained in Baird's Manual, have to slope gradually upwards, and the highest point would be at the well, where it would be taken down and connected with the tide box at the bottom of the well. At the highest point of this syphon pipe an upright pipe would be connected, having two stop-cocks separated by an interval, and having a small cistern which would be kept full of salt water. By this arrangement any air which might collect in the syphon pipe, would, on opening the lower cock while the upper was closed, rise into the space between the cocks, and on closing the lower and then opening the upper cock the air would pass out of the pipe. In this way air could be removed at any state of the tide,

instead of only at high tide, as with the method employed at the Indian stations, and it would not be essential that the highest point of the syphon should be below the lowest high tide. It would be necessary to run, also, another smaller syphon pipe connected with a tide box in which to place an ordinary tide staff. By the agreement or otherwise of the readings of this tide staff with the automatic gauge it could be ascertained whether either syphon tube was working freely. The ends of the pipes under tide water would be protected by roses on a plan, a slight modification of that adopted at the Indian tidal stations.

RIMOUSKI.—At Rimouski there is a wharf, but I am informed that frequent dredging is required to keep a sufficient depth of water. There would therefore be great danger of the tube connecting the gauge, if established at this point, with tide water, becoming choked with sand.

RIVIÈRE DU LOUP.—Here there is a pier, but as it is several miles outside the town it would be difficult to find anyone to properly attend to it during the winter. It would, however, be available for a short series during summer.

TADOUSAC.—The wharf at this point is being extended, and a good site for a tide house could be found on the extension. The well could be built into the wharf. The chief objection to the site is that the tide records would be likely to be affected by the large body of water flowing down the Saguenay River especially in the spring.

MURRAY BAY.—Here there are two wharfs. The one at Cap à l'Aigle would probably be the better one for placing a tide gauge, as it is less frequented by steamboats, and it would be a good situation for placing a gauge to obtain a short series of observations. If a suitable person can be found to take charge of it, a Stierlé gauge might be used at this point.

As the summer steamboats had mostly stopped running, and consequently travel from point to point was slow, I deemed it advisable not to extend my tour to other points; but it will be advisable to have short series of observations conducted at other points at which there are wharfs while the long series are being obtained at other points.

Correspondence has been carried on between the Department of Marine and that of Public Works with a view to arranging for the placing of a tide gauge at Cap à la Roche, and it would be desirable to have one of the long series of observations taken at this point. The choice for the other long series seems to lie between Rimouski and Tadousac. At Rimouski the mechanical difficulties are the greater, but otherwise it seems to us the more suitable place.

A correspondence was carried on with the Common Council of St. John, N.B. with a view to getting them to co-operate in the taking of the tidal observations to the extent of providing an observer. This, however, they decline to do.

An old series of observations taken at Halifax, is being worked up by Mr. Roberts, of the "British Nautical Almanac" office, who will compute the tides for that port for the coming year by means of the tide-predicting machine.

In November, while attending a meeting in Boston of a committee to discuss the best method of ascertaining the position of the Magnetic North Pole, I met Prof. T. C. Mendenhall, and ascertained that the nearest tidal station at present in operation, in connection with the United States Coast and Geodetic Survey, was that at Sandy Hook. Accordingly, on the 15th of November, after the meeting, I visited Sandy Hook. Here there are two gauges in operation, one a Stierlé, and the other a single roller gauge. The object of my visit was principally to ascertain what precautions they found it necessary to take against frost. At Sandy Hook, Mr Spalding, the observer in charge informed me that all they had to do was to keep a coal oil stove burning in the tide-house; but he had formerly been observer on the coast of Maine, where further precautions had to be adopted. There, hot water was circulated through a $1\frac{1}{4}$ -inch pipe between the outer casing and the tide well, down on one side and up on the other. The circulation was maintained by having two 150-gallon casks, the one at a higher level than the other. The water was pumped by means of a force pump from the lower cask into the upper, and the feed was regulated by means of a cock, so as to endeavour to make the flow due to the head of water such

that the upper cask would just empty in twenty-four hours. The water was heated by passing it through a coil around a coal stove. Much attention was needed to properly regulate the flow, as if the heating was less than usual the flow was faster, there being less difference of temperature between the down and up-flowing water, and consequently there was danger of the upper cask becoming empty before the expiration of the twenty-four hours. Since my return to Toronto I have been trying experiments on an apparatus which I have devised for maintaining an automatic circulation of hot water to the necessary depth below the source of heat. My experiments are not yet completed, but as far as they have gone they lead me to conclude that the method experimented on will prove successful. Should this be the case, I will report again on the subject, and describe the method.

I have the honour to be, Sir,

Your obedient servant,

CHARLES CARPMAEL,

Director.

REPORT ON TIDAL WORK DONE IN THE MARITIME PROVINCES OF CANADA DURING THE SEASON OF 1890.

To C. CARPMAEL, Esq., M. A.,
Director of the Meteorological Service,
Toronto.

SIR,—Having been finally authorized by the Honourable C. H. Tupper, M.P., Minister of Marine and Fisheries, to carry out my proposals for the establishment of two tide staff stations on the outer or Atlantic coasts of Nova Scotia, I decided to establish one at the Port of Canso and the other in Liscomb Harbour, Nova Scotia.

The object of the establishment of these two stations was to check the accuracy of the tidal constants as they appear in the British Admiralty tide tables, and as the computation of tide tables for Halifax, from data already existing in the archives of the Hydrographic Office, has been sanctioned, if the Admiralty tide table constants were found approximately correct they could be utilized so as to make Halifax a "port of reference" for all the harbours between Scatari and Cape Sable.

By direction of the Minister I have now handed over all the papers in connection with these stations to you, and will shortly describe the methods adopted to obtain the observations at these places.

At Canso the instrument used was a tide staff, made after the pattern of the one printed in my report on tidal observations for the year 1887, which was published as an appendix to the report of the Department of Marine for that year. This staff was constructed for 7 feet rise and fall, as the Admiralty tide tables gave spring rise there as 6 feet. This served very well for the great part of the series, but during the second lunation there were some exceptionally high tides, due I think to meteorological conditions. One tide rose over 8 feet, covering wharves, &c.; this was accompanied by a heavy gale, and shingle, sand and debris of sea weed were driven round the base of the gauge, so as to choke the entrance pipe, and thus some days were lost, though Mr. Young, the observer, telegraphed to me for instructions, and I wired him back as soon as I got his message on my arrival in port.

We can get from this station two sets, one a complete lunation and the other a semi-lunation. The principle adopted was that of taking five separate readings at one minute intervals each hour, the time being the $58^m-59^m-0^m-1^m-2^m$. In the event of the observer being late, the actual times of reading are entered, so that the height at the hour can be easily obtained by graphic interpolation. The time was obtained daily

from the cable station at Canso, and was that of the 60° west of Greenwich; it was never more than a few seconds in error throughout the entire series.

The zero of the staff was connected with a bench mark cut in a large stone on the shore above high water mark on the north-west side of the pier on which the staff was bolted.

LISCOMB.—At Liscomb the observer was Capt. W. H. Pye, an old ship master, now a resident on the harbour there. Capt. Pye was the owner of the wharf on which the tide house was built, and had acted as tide watcher many years before on the coast of Nova Scotia, when Capt. Orlebar, R.N., was making the survey. He was thus well qualified for taking charge of the work. At this station a small portable tide gauge was used. It is of the pattern known as the Stierlé gauge, being named after its inventor; and officers of the United States Coast Survey who had used this form of gauge informed me that they had obtained good results from it.

This gauge is of the three cylinder pattern, the record being kept on a continuous web of paper, which is unwound from one cylinder and passing over the central cylinder is wound up on the third cylinder.

The central cylinder is driven by the clock, and revolves twice in twenty-four hours. It has on either end twelve pins, which puncture the paper as it passes forward. This cylinder is about 4 inches in diameter, and the pine holes make time abscissae for the record, and would, if the clock ran perfectly, represent an inch of paper to an hour of time.

The record of the height of water is made by a pencil carried on a worm shaft, and was so made in this case that an inch of ordinate of height represented a foot of rise and fall of tide. The cylinder is 14 inches long, and for heights greater than 12 feet a worm shaft can be supplied, cut to two (2) revolutions or feet to the inch, or indeed to any pitch desired. This worm shaft is driven by a float-wheel, the gauge being set right over the well. The edges of the float-wheel are heavily flanged, and have three cycloidal notches cut in them down to the periphery of the wheel. These notches are just 4 inches apart, and correspond with little cross bars rivetted on the brass float-band, also 4 inches apart, one end of this brass band being attached to the float and the other to the counterpoise. The rise and fall of the tide is continuously recorded.

The base line is marked by a fixed pencil, and corresponds to any convenient figure at which it may be set.

The gauge can also be used as a single roller gauge by detaching the two auxiliary rollers and fastening a single sheet of paper on the central cylinder by means of light rubber bands. If you use this gauge in the future I would strongly recommend that it should be used in this way, as I found that the slackening and tightening of the paper, due to changes in the hygrometric condition of the atmosphere, affected the rate of the clock quite perceptibly. This would, of course, be entirely obviated if the gauge was used as a single roller gauge, and with a little practice there is no reason why an observer should not change the paper quite easily in a couple of minutes, without in any way interfering with the clock clutch; though, if thought advisable, the cylinder can be disconnected and lifted out to have the paper changed and replaced without any great delay.

At this station I prepared a record-book, which I have handed over to you, and the instructions were that the gauge was to be visited four times a day, about the times of high and low water, both day and night, and this was done without a single failure throughout the entire period of two lunations covered by the observations; at each visit the marking pencil was moved vertically by shaking the float-wheel. At this moment the true time was entered, also the time shown by the clock, and the height of the water on the staff outside the well.

We have thus four absolute observations each day of time and height by which to reduce the record traced by the pencil.

The time at this station was obtained from a Poole chronometer kept in the observer's house, in a double case, and in a position where it was not subject to violent fluctuations of temperature. The error was determined by solar artificial

horizon observations at the commencement of the series, and by comparison at Halifax at the close. The practice was for the observer to keep his watch set at true time, and to compare and set it if necessary before visiting the gauge.

The zero point of the gauge was connected with a bench mark on a large rock near the well at the head of the wharf.

At this station, also, the exceptionally high tide was experienced, and the float rose over the top of the well; but the observer stayed at the gauge till the tide had again fallen, and thus the record was maintained continuously.

Comparisons of these two stations give a fair test of the value of the systems, staff and gauge. There is no question that the gauge is preferable where a really intelligent and capable observer is obtainable, whilst for the staff readings all that are required is that the observer shall be absolutely honest and faithful, and able to make good figures, and I think you will find that some system of staff observations will, on the whole, be that which will be best for the intermediate short series stations.

I may add that the time used at Liscomb was that of the 60th Meridian west.

I have the honour to be, Sir,

Your obedient servant,

ANDREW R. GORDON,

Lieut. R. N.

APPENDIX No. 17.

LIST of Persons to whom Rewards have been granted by the Government of Canada, for the year 1890, for gallant and humane services rendered in Saving Life from Shipwrecked Canadian Vessels, or by British or Foreign Governments for similar services rendered by Canadian Vessels in Saving Life from Shipwrecked British and Foreign Vessels for same period.

Names and Designations of Persons.	Nature of Service Rendered.	Date of Service Rendered.	Description of Reward.
1889.			
Capt. Emil Kruger, master ; Baumier, carpenter ; Gott- fried Wedel and Wilhelm During, seamen, of the Ger- man barque "Charlotte and Anna," of Danzig.	Humane and generous services to shipwrecked crew of brigantine "Proteus," of Yarmouth, N.S., abandoned at sea on a voyage to Rosario from Portland, Maine.	Feb. 2..	A binocular glass to mas- ter, \$15 to carpenter, and \$10 to each seaman.
Capt. Hans Peter Lawson, master, of steamer "Mus- koka."	Rescue of 8 persons in danger of drowning by the capsizing of yacht on Lake Joseph, Ont.	Aug. 21..	A letter of thanks.
Capt. Alfred Bradford, mas- ter ; George Miles Colson, seaman, of the American schooner "Aristook," of Gloucester, Mass.	Rescue of 4 of the shipwrecked crew of schooner "J. L. Colter," of St. John, N.B., broken to pieces 70 miles to southeast of Mataneus Rock.	Sept. 19..	A gold watch to master, and a silver watch to seaman.
Crew of lifeboat at Port Rowan, Ont.	Services in rendering assistance to schooner "Erie Wave," of Port Burwell, stranded on shore of Lake Erie, a mile below Clear Creek, Ont.	do 30..	\$21.
Capt. M. S. Brewer, A. P. Marden and Loring Thorpe, fishermen, of South Bristol, Maine.	For humane and gallant exertions in rescue of 5 men of the crew of the schooner "Ocean Belle," of Digby, N.S., run ashore on the Thread of Life Ledges, near Thrumb Cape.	Nov. 28..	A gold watch to each.
Mrs. Wyatt, Mr. Thomas Wyatt and the members of their family, of the light station at Forteau, Strait of Belle Isle, Coast of Labra- dor.	Valuable assistance and kindness and hospitality on the occasion of the wreck of H.M.S. "Lily."	Sept. 16..	A clock by the Lords Com- missioners of the Admir- alty.
Robert McIntosh, Alex. R. McNeil, Murdoch McNeil, fishermen, of Bay St. Law- rence, N.S.	Rescuing from drowning 3 fishermen whose boat had capsized.	do 19..	A binocular glass to each man.
Hugh McCullough, coxswain, and crew of lifeboat at Wel- lington, Ont.	For services in rescue of wrecked schooner "Kate."	do 26..	\$43.
Wm. Ward, coxswain, and crew of lifeboat at Toronto Island, Ont.	Rendering assistance wrecked vessel at Port Credit.	Nov. 27..	\$32.
Ambrose Dowley and Ken- neth McRae.	Saving a man from drowning off Neil's Harbour, N.S.	Dec. 7..	A silver watch to each of the men.
Chas. Thomas, George Brown, jun., Chas. H. Thomas, E. Dempsey, P. Dempsey, jun., Jas. Dempsey, jun., Archi- bald Darrah, Jeffrey Gor- man and John Darrah, of Herring Cove, N.S.	Services in rescue of crew of schooner "Union" on shore at Herring Cove, N.S.	do 22..	\$4 to each of the men.

LIST of Persons to whom Rewards have been granted, &c.—*Concluded.*

Names and Designations of Persons.	Nature of Service Rendered.	Date of Service Rendered.	Description of Reward.
		1885.	
L. Spafford, coxswain, and crew of lifeboat at Poplar Point, Ont.	Services rendered to schooner "Juria."	Oct. 27..	\$108.50.
do do ..	do do "Parthenon."	Nov. 22..	
do do ..	do do "Glenora"...	Nov. 19..	
do do ..	do barge "Valencia"...	May 28..	
		1890.	
Capt. Crosley of ship "Equator."	Rescuing shipwrecked crew of schooner "Sarah Godfrey" abandoned at sea. Payment and subsistence expenses allowed.	Mar. 31..	\$83.20.
D. Rooney, coxswain, and crew of lifeboat at Cobourg, Ont.	Services in going to assistance of 2 fishermen.	Apr. 4..	\$22.
Garrett and Cronk, and 4 of the crew of the lifeboat at Wellington, Ont.	Rescuing 2 fishermen of Gaskell's Island, whose boat had capsized.	do 7..	\$5 to the first 2 men, and \$1.50 to each of the 4 others.
William Babb, coxswain, and crew of the lifeboat at Goderich, Ont.	Attempting rescue of crew of "Parisian."	do 9..	\$46.25.
Harris Allan and Grant Gibbons, of Morrisburg, Ont.	Rescuing a young lady from drowning at Morrisburg, Ont.	Aug. 5..	A letter of thanks to each.
Capt. C. S. Petersen, master, of the American schooner "Siegfred," of Gloucester, Mass.	Humane and generous services in rescuing the crew of the schooner "Blizzard," of Lunenburg, N.S., abandoned at sea.	Nov. 3..	A gold watch.

APPENDIX No. 18.

*(Translation.)*REPORT OF THE DECAYED PILOT FUND OF QUEBEC FOR THE
YEAR 1890.

QUEBEC, 31st December, 1890.

SIR,—I have the honour to forward a detailed statement in duplicate of the moneys received and expended by the Decayed Pilot Fund of Quebec for the year 1890; also a similar statement of the accounts of the Corporation of Pilots for the year ending this day.

The amount received by the Corporation of Pilots was...	\$ 127,734 19
And the total amount expended.....	23,424 54
Leaving a balance of.....	<u>\$ 104,309 65</u>

To be distributed among 149 to 150 practising pilots, giving to each a net dividend of \$695.40.

Two hundred and sixty-four foreign vessels have paid.....	\$ 29,166 21
And seven hundred and thirty-six British vessels paid.....	<u>98,567 98</u>

All of which is respectfully submitted.

I have the honour to be, Sir,

Your obedient servant,

F. X. DION,

Secretary-Treasurer.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

STATEMENT of Moneys Received and Disbursed by the Corporation of Pilots for the
Decayed Pilot Fund of Quebec, during the year 1890.

RECEIPTS.		\$	cts.	\$	cts.
To Balance of 1889.....		1,096	75		
Percentage on contributions of Pilots.....		9,105	90		
Interest on investments.....		3,073	00		
Interest on Savings Bank.....		11	17		
				13,287	42
EXPENDITURE.					
By Pensions.....		9,577	68		
Relief.....		40	00		
Salaries.....		500	00		
Deposit in Savings Bank.....		3,000	00		
Balance on hand.....		169	74		
				13,287	42
PILOTS RELIEVED BY THE FUND.					
<i>One Pilot.</i>					
Jean Gobeil.....		40	00		
				40	00
PENSIONERS AT THE EXPENSE OF THE FUND.					
AMOUNT PAID TO EACH DURING THE YEAR FROM 1ST NOVEMBER, 1889, TO 1ST NOVEMBER, 1890.—PAID FROM 31ST DECEMBER, 1889, TO THE 31ST DECEMBER, 1890.					
<i>Eighteen Pilots at \$100.</i>					
Frédéric Bernier.....		100	00		
Laurent Tremblay.....		100	00		
Dominique Girard.....		100	00		
François Noël.....		100	00		
Thomas Després.....		100	00		
Marcel LeBell.....		100	00		
Laurent Larochelle.....		100	00		
Hilaire Jouvin.....		100	00		
Pierre Lapiere.....		100	00		
Jean Pouliot.....		100	00		
Gabriel Lachance.....		100	00		
Joseph Pepin.....		100	00		
J. Bte. Bernier.....		100	00		
George Sansterre.....		100	00		
Thomas Simard.....		100	00		
Louis Dugal.....		100	00		
J. Bte. Talbot.....		100	00		
François Vézina.....		100	00		
				1,800	00
<i>Nine Pilots at \$92.</i>					
Maurice Pepin, died 19th July, 1890.....		66	19		
Dominique Perreault.....		92	00		
Louis Fontaine.....		92	00		
François Thivierge.....		92	00		
Isaïe Marticotte.....		92	00		
Joseph Morency, died 15th December, 1889.....		11	50		
Pierre Lemieux.....		92	00		
Edouard Labrecque.....		92	00		
Jean Coulombe.....		92	00		
				721	69
<i>Seven Pilots at \$84.</i>					
Amable St. Laurent.....		84	00		
J. Bte. Paquet.....		84	00		
François Godreau.....		84	00		
Clovis, Anctil.....		84	00		
Alexis Vézina.....		84	00		
Louis Ol. Leclerc.....		84	00		
Abraham Després.....		84	00		
				588	00

STATEMENT of Moneys Received and Disbursed by the Corporation of Pilots for
the Decayed Pilot Fund of Quebec, &c.—*Continued.*

PENSIONERS AT THE EXPENSE OF THE FUND— <i>Concluded.</i>		\$	cts.	\$	cts.
<i>Two Pilots at \$82.</i>					
Joseph Lavoie.....		82	00		
Ovide Dick.....		82	00		
				164	00
<i>Three Pilots at \$80.</i>					
Frs. X. Corriveau.....		80	00		
François Pelletier.....		80	00		
Antoine Roussel.....		80	00		
				240	00
<i>One Pilot at \$78.</i>					
Alexis Roy, died 15th March, 1890.....		42	25		
				42	25
<i>One Pilot at \$76.</i>					
F. X. Ménard.....		76	00		
				76	00
<i>Three Pilots at \$73.</i>					
Pierre Charest.....		73	00		
Léandre Raymond.....		73	00		
Paul Pouliot.....		73	00		
				219	00
<i>One Pilot at \$47.</i>					
James Forbes.....		47	00		
				47	00
WIDOWS OF PILOTS.					
<i>Twenty-two Widows at \$58.</i>					
Widow of Jacques Tremblay, arrears.....		29	00		
do do re-married 21st May, 1890.....		32	22		
do Charles Brown.....		58	00		
do J. Bte. Dion.....		58	00		
do Charles Chouinard, died on the 4th February, 1890.....		15	13		
do Louis Joseph Lavoie.....		58	00		
do Charles Pouliot.....		58	00		
do Louis Laprise.....		58	00		
do Max. Caron, arrears.....		29	00		
do do year.....		58	00		
do Edouard Petitgrew.....		58	00		
do Alexis Pelletier.....		58	00		
do Pierre Pepin.....		58	00		
do Alex. Vaillancourt.....		58	00		
do Magloire Delisle, superannuated 10th Nov., 1889.....		56	39		
do Edouard Marcoux.....		58	00		
do Charles Bernier.....		58	00		
do Paul Langlois.....		58	00		
do Alexis Delisle.....		58	00		
do Charles Nolet.....		58	00		
do Paul Blouin.....		58	00		
do Yves Sylvestre.....		58	00		
do Charles Dumas.....		58	00		
do Laurent Godbout.....		58	00		
				1,263	74

STATEMENT of Moneys Received and Disbursed by the Corporation of Pilots for
the Decayed Pilot Fund of Quebec, &c.—*Continued.*

PENSIONERS AT THE EXPENSE OF THE FUND— <i>Continued.</i>		\$	cts.	\$	cts.
WIDOWS OF PILOTS— <i>Continued.</i>					
<i>Seventeen Widows at \$55.</i>					
Widow of Pierre Ruelland.....		55	00		
do Paul Larochelle.....		55	00		
do Joseph Raymond.....		55	00		
do Jean Frs. Lamarre.....		55	00		
do Robert Demers.....		55	00		
do Pierre Laprise.....		55	00		
do Michel Morin, arrears.....		13	75		
do do year.....		55	00		
do F. X. Delisle.....		55	00		
do Michel Guénard.....		55	00		
do Barth. Lachance.....		55	00		
do Hubert Dumas.....		55	00		
do Cyprien Langlois.....		55	00		
do Jean Lavoie.....		55	00		
do Pierre Gourdeau, arrears.....		13	75		
do do on account.....		41	25		
do Joseph Morrencey, superannuated 15th December, 1889.....		48	12		
do F. X. Lachance.....		55	00		
do Narcisse Forgues.....		55	00		
				941	87
<i>Fourteen Widows at \$54.</i>					
Widow of Michel Fournier.....		54	00		
do Paschal Dick.....		54	00		
do Pierre Gourdeau (A.F.).....		54	00		
do Bénonie Normand.....		54	00		
do Damase Babin.....		54	00		
do Amable Genest, arrears.....		27	00		
do do on account.....		27	00		
do François Rioux.....		54	00		
do Michel Fortin.....		54	00		
do Marcel Côté, died 25th January, 1890.....		13	05		
do Gabriel Plante.....		54	00		
do Eustache Dorion.....		54	00		
do Joseph Lapointe.....		54	00		
do J. E. Adam.....		54	00		
do Edouard Demers.....		54	00		
				715	05
<i>Fourteen Widows at \$52.</i>					
Widow of Félix Caron.....		52	00		
do David Cinq-Mars.....		52	00		
do Jean Giroux.....		52	00		
do Pierre Gourdeau (A.N.).....		52	00		
do Joseph Dussil.....		52	00		
do Pierre Courodeau.....		52	00		
do J. Bte. Tremblay.....		52	00		
do Magloire Mercier.....		52	00		
do Louis Crépault, on account.....		26	00		
do Célestin St. Pierre.....		52	00		
do François Nadeau, died 16th March, 1890.....		19	50		
do Antoine Boucher.....		52	00		
do Vitot Charest.....		52	00		
do Alexis Roy, superannuated 15th March, 1890.....		23	84		
				641	34
<i>Fourteen Widows at \$50.</i>					
Widow of Edouard Chevalier.....		50	00		
do Thomas Dick.....		50	00		
do Denis Glynn.....		50	00		
do Wm. Irvine, on account.....		37	50		
do Fabien Langelier.....		50	00		

STATEMENT of Moneys Received and Disbursed by the Corporation of Pilots for the Decayed Pilot Fund of Quebec, &c.—*Continued.*

PENSIONERS AT THE EXPENSE OF THE FUND— <i>Continued.</i>		\$	cts.	\$	cts.
WIDOWS OF PILOTS— <i>Continued.</i>					
Widow of J. Bte. Laroche.	.....	50	00		
do A. Lavoie (L. M.)	.....	50	00		
do Henri Lavoie, died 29th September, 1890.	.....	45	69		
do Henri Noël	.....	50	00		
do Fred. Simpson	.....	50	00		
do Joseph Simpson	.....	50	00		
do Pierre Ross, on account	.....	37	50		
do Amable Fournier, arrears.	.....	25	00		
do do on account	.....	37	50		
do Julien Langlois	.....	50	00		
				683	19
<i>Thirteen Widows at \$48.</i>					
Widow of Germain Caron	.....	48	00		
do Jean Dion	.....	48	00		
do Jean Pelletier	.....	48	00		
do C. F. Koenig	.....	48	00		
do Ovide Lachance	.....	48	00		
do L. (E.D.) Langlois	.....	48	00		
do Antoine Michaud, arrears	.....	12	00		
do do on account	.....	36	00		
do Pierre Normand	.....	48	00		
do David Petitgrew, on account	.....	36	00		
do Benjamin Pineau	.....	48	00		
do John Simpson	.....	48	00		
do Joseph Lévesque, on account	.....	36	00		
do François Côté	.....	48	00		
				600	00
<i>Five Widows at \$40.</i>					
Widow of Paul Blouin	.....	40	00		
do Célestin Côté	.....	40	00		
do P. Desrosiers, on account	.....	30	00		
do F. X. Lachance	.....	40	00		
do Edouard Turgeon	.....	40	00		
				190	00
<i>Five Widows at \$34.</i>					
Widow of Jacques Dandurand	.....	34	00		
do André Keable	.....	34	00		
do Guil. Morency	.....	34	00		
do Pierre Rouleau	.....	34	00		
do Henri Verrault	.....	34	00		
				170	00
<i>Ten Widows at \$32.</i>					
Widow of Fabien Caron	.....	32	00		
do Magloire Côté, on account	.....	24	00		
do Antoine Fortier	.....	32	00		
do L. (A.R.) Langlois, arrears	.....	28	00		
do do on account	.....	14	00		
do Thomas McNeil	.....	32	00		
do Antoine Raymond	.....	32	00		
do George Simard	.....	32	00		
do Louis Thivierge	.....	32	00		
do Alfred Turgeon	.....	32	00		
do Alexis Vézina	.....	32	00		
				312	00

STATEMENT of Moneys Received and Disbursed by the Corporation of Pilots for
the Decayed Pilot Fund of Quebec, &c.—*Continued.*

PENSIONERS AT THE EXPENSE OF THE FUND— <i>Continued.</i>		\$	cts.	\$	cts.
ELEVEN CHILDREN.					
David Charest (1), on account.....		11	25		
Thomas Boutin (1).....		15	00		
P. Toussant (1).....		15	00		
F. Dupuis (1).....		15	00		
N. Fortin (1).....		15	00		
J. Johan (1).....		15	00		
Isaac Forbes (2).....		27	48		
Pierre S. Laprise, arrears (3).....		11	34		
do year.....		37	48		
				162	55
RECAPITULATION OF PENSIONS.					
18 pilots at \$100.....		1,800	00		
9 do at 92.....		721	69		
7 do at 84.....		588	00		
2 do at 82.....		164	00		
3 do at 80.....		240	00		
1 do at 78.....		42	25		
1 do at 76.....		76	00		
3 do at 73.....		219	00		
1 do at 47.....		47	00		
45 pilots.....					
22 widows at \$ 58.....		1,263	74		
17 do at 55.....		941	87		
14 do at 54.....		715	05		
14 do at 52.....		641	34		
14 do at 50.....		683	19		
13 do at 48.....		600	00		
5 do at 40.....		190	00		
5 do at 34.....		170	00		
10 do at 32.....		312	00		
114 widows.....					
11 children at \$15, \$12½, and \$10.....		162	55		
170 pensioners.....				9,577	68
CREDIT.					
RECEIPTS—DETAILS.					
To Balance of 1889.....		1,096	75		
Trustees of the Quebec Roads: 1 year's interest to 1st July, 1890, on \$22,800 at 6 per cent.....		1,368	00		
The City of Quebec: 1 year's interest to 1st July, 1890, on \$9,000 at 7 per cent.....		630	00		
The Treasury Department: 1 year's interest to 1st July, 1890, on \$20,000 at 5 per cent.....		1,000	00		
Estate P. Boisseau: 1 year's interest to 26th January, 1890, on \$1,000 at 6 per cent.....		60	00		
The Corporation of Pilots: 1 year's interest on \$300 at 5 per cent.....		15	00		
The Savings Bank: Interest received on current account to 25th May, 1890.....		11	77		
Received from the Corporation of Pilots.....		8,941	59		
do do pilots acting as captains.....		164	31		
				13,287	42

STATEMENT of Moneys Received and Disbursed by the Corporation of Pilots for the Decayed Pilot Fund of Quebec, &c.—*Concluded.*

DEBIT.				\$	cts.	\$	cts.
PENSIONS, RELIEF, &c., PAID DURING THE SEASON OF 1890.							
By Relief.....					40	00	
Arrears of pension to 31st December, 1889.....					168	84	
Amount of pay list of pensions for quarter ended 31st January, 1890.....					2,443	18	
do do do 30th April, 1890.....					2,408	71	
do do do 31st July, 1890.....					2,349	77	
do do do 31st October, 1890.....					2,207	18	
Salaries of the secretary-treasurer and assistant.....					500	00	
Deposit in Savings Branch of La Banque Nationale.....					3,000	00	
Balance on hand.....					169	74	
							13,287 42
STATEMENT OF FUND.							
Moneys loaned.....					53,352	71	
Amount in savings bank.....					3,000	00	
do secretary-treasurer's hands.....					169	74	
					56,522	45	
To be deducted: Arrears of pensions due at this date.....					310	48	
							56,211 97

F. X. DION,
Secretary-Treasurer.

QUEBEC, 31st December, 1890.

N. B.—At the general annual assembly of the pilots, held on the 10th instant, it was unanimously decided not to audit the books and accounts for the year ended the 31st December, 1890.

Certified,
F. X. DION,
Secretary-Treasurer.

APPENDIX No. 19.

MONTREAL DECAYED PILOT FUND.

HARBOUR COMMISSIONERS OF MONTREAL,
SECRETARY'S OFFICE, MONTREAL, 2nd January, 1891.

WILLIAM SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I have the honour, by direction of the Harbour Commissioners of Montreal, to transmit herewith, for the information of the Honourable the Minister of Marine and Fisheries, the usual statements of (1) receipts and disbursements of the Montreal Decayed Pilot Fund for the year ended 31st December, 1890, and (2) assets belonging to the fund at 31st December, 1890.

The following is an abstract of the former :—

Receipts.

From Trinity dues collected at Montreal	\$2,642 31
do do Sorel.....	100 55
do do Three Rivers.....	34 01
From sundry small accounts of poundage.....	22 28
	\$2,799 15
From interest on investments and on cash in bank.....	2,567 58
Total.....	\$5,366 73

Disbursements.

Paid pensions to old and infirm pilots and widows of pilots	\$4,055 49
Paid Messrs. Riddell & Common for audit of fund	25 00
Paid postage on pensions remitted during the year	5 31
Paid Wulff & Co. amount of poundage on bark "Askoy," received on 2nd August from Norbert Arcand, same amount having been called for and paid to collector H.M.'s Customs on 26th August, accordingly twice paid.....	1 85
	4,087 65
Showing a net gain for the year of.....	1,279 08

As there was also a gain in 1889 of \$874.55, two 4 per cent. harbour bonds were purchased to invest this surplus.

There were three deaths among the pensioners, namely, those of old Pilot Joseph L. Dessureau, on 9th July; widow Hector Hamelin, and old Pilot Adolphe Lisé, both on 12th October.

The widows of the two deceased superannuated pilots were placed on the list of pensioners, which has now on it four old pilots and seventeen widows, at the same rates as last year.

I have the honour to be, Sir,

Your obedient servant,

ALEXANDER ROBERTSON,

Secretary.

1890.		\$	cts.	1890.		\$	cts.
Jan. 2	To Balance from December, 1889,				By Pensions paid to the following, for three months ended 31st July—		
do 9	Six months' interest, due 1st January, on the shares of the City of Montreal Consolidated Fund, viz., \$5,000, 5 per cent stock	1,812	24	Feb. 1	Widow Olivier Abelle, Montreal	37	33
do 13	Harbour of Montreal Coupons, due 5th January—	125	00	do 1	Hubert LeMay do	37	33
	Series M, Nos. 154-156=3×\$82.50...\$ 97 50			do 3	Zéphirin Boudreau, Three Rivers	37	33
	do N do 35-43=8×65.00...520 00			do 3	Edouard Boudreau do	37	33
	do P do 81=1×60.00...60 00			do 3	Isaie Beaudry, Sorel	37	33
	do R do 20 and 102=2×15.00...30 00			do 3	David Bouille, Deschambault	29	33
	do R do 117-119=3×30.00...90 00			do 3	Narcisse Bouille (née Proulx) Deschambault	37	33
	do D do 21 and 45-49=6×25.00...150 00			do 3	Sévère Bellisle, Deschambault	37	33
	do F do 164-172=9×20.00...180 00			do 3	Placide Gaillardetz, St. Grégoire	37	33
May 31	Trinity dues for May, from collector H.M. Customs, Montreal	1,127	50	do 3	David Mathien, Grondines	32	00
June 7	Poundage (additional) for difference of draft from—	275	38	do 3	Zéphirin Mayrand, Contrecoeur	37	33
do 9	Carbray, Routh & Co.			do 3	Edouard Naud, Sorel	32	00
do 9	Munderloh & Co.	0	31	do 3	Eusebe Toupin, Three Rivers	32	00
do 10	Kingman, Brown & Co.	0	12	do 3	Old Pilot Jos. L. Dessureau, Sorel	75	00
do 11	F. C. Henshaw	0	06	do 3	do J. B. Dorval, Cap de la Madeleine	75	00
do 11	H. E. Hurray	0	06	do 3	do Adolphe Lisé, Batisseau	75	00
do 11	Poundage from C. Brunet, on SS. "Nithsdale," with 11 feet draft, from Montreal to Charlemagne	0	55	do 3	do Onésime Naud, Sorel	75	00
do 12	Poundage (additional) for difference of draft from—			do 3	do George Raymond, Deschambault	75	00
do 12	R. Reford & Co	0	39	do 3	do Hector Hamelin, St. Pierre les Becquets	37	33
do 16	Carbray, Routh & Co., on SS. "Amba"	0	09	do 7	do Narcisse Bouille (née Arcand) Deschambault	37	33
do 27	Poundage on SS. "Cynthia," for trip on which she was lost, in May, 1889	2	68	do 12	do Oliver Raymond, Montreal	37	33
do 30	Trinity dues for June, from collector H.M. Customs, Montreal	410	62	do 17	do Old Pilot Joseph Léveillé do	75	00
July 5	Six months' interest, due 1st July, on the shares of the City of Montreal Consolidated Fund, viz., \$5,000 of 5 per cent stock	125	00	do 17	do Riddell & Common, for audit of this fund for the year ended 31st December, 1889	25	00
do 10	Harbour of Montreal Coupons, due 5th July—			By Pensions paid to the following, for 3 months' ended 30th April—			
	Series M, Nos. 154-156=3×\$82.50...\$ 97 50			do 1	Widow Olivier Abelle, Montreal	37	33
	do N do 36-43=8×65.00...520 00			do 1	Hubert Lemay do	37	33
	do P do 81=1×60.00...60 00			do 1	Zéphirin Boudreau, Three Rivers	37	33
	do R do 20 and 102=2×15.00...30 00			do 1	Edouard Boudreau do	37	33
	do R do 117-119=3×30.00...90 00			do 1	Isaie Beaudry, Sorel	37	33
	do D do 21 and 45-49=6×25.00...150 00			do 1	Placide Gaillardetz, St. Grégoire	37	33
	do F do 164-172=9×20.00...180 00			do 1	David Mathien, Grondines	32	00
do 31	Trinity dues for July, from collector H.M. Customs, Montreal	1,127	50	do 1	Edouard Naud, Sorel	32	00
		459	98	do 1	do Old Pilot Jos. L. Dessureau, Sorel	75	00
				do 1	do Adolphe Lisé, Batisseau	75	00
				do 1	do Onésime Naud, Sorel	75	00
				do 1	do George Raymond, Deschambault	75	00
				do 2	do Joseph Léveillé, Montreal	75	00
				do 2	Widow David Bouille, Deschambault	29	33
				do 2	do Narcisse Bouille (née Proulx) Deschambault	37	33
				do 2	do Sévère Bellisle, Deschambault	37	33
				do 2	do Zéphirin Mayrand, Contrecoeur	37	33

Aug. 2	To Poundage (additional) on Norwegian barque "Flied," for error in draft when cleared	0 12	do	2	do	Ensebe Toupin, Three Rivers.	32 00
do 2	Poundage from Pilot Norbert Arcand on barque "Askoy," brought from Quebec to Montreal with draft of 18' 6"	1 85	do	3	do	do Narcisse Bouillé (née Arcand) Deschambault.	37 33
do 29	Poundage (additional) on SS. "Andergorn," for difference in draft	0 14	do	9	do	Old Pilot J. E. Dorval, Cap de la Madeleine.	75 00
do 30	Trinity dues for August from collector of H. M. Customs, Montreal.	400 78	do	13	do	Widow Olivier Raymond, Montreal.	37 33
Sept. 30	Trinity dues for September from collector of H. M. Customs, Montreal.	405 70	do	18	do	do Hector Hamelin, St. Pierre les Becquets.	37 33
do 30	Poundage from Joseph Hamelin, pilot, on his pilotage for the removal of the barque "Karnack" from wharf at section 40 to the new pier wharf at Maisonneuve.	0 25	do	18	By	Postage on pensions remitted in February, and up to date. Pensions paid to the following for three months ended 31st July:—	2 75
Oct. 20	Poundage on the pilotage of H. M. S. "Canada," up and down in September, with 20 feet draft, the pilots being Jean Arcand and Lydoric Bouillé.	5 00	Aug.	1	do	Widow David Mathieu, Grondines.	32 00
do 25	Poundage on the pilotage of H. M. S. "Thrush," up and down in September, with 13 feet draft, the pilot being Honoré Dussault.	3 24	do	1	do	do Hubert Lenay, Montreal.	37 33
do 31	Trinity dues for October from collector of H. M. Customs, Montreal.	382 91	do	2	do	do Olivier Abelle	37 33
Nov. 7	To Received from the Canada Shipping Co. poundage short paid when clearing the following vessels, namely:— "Lake Winnipeg" \$0 02 "Lake Ontario" 0 16 "Lake Superior" 0 06 "Lake Huron" 0 06	0 30	do	4	do	Old Pilot J. B. Dorval, Cap de la Madeleine.	75 00
do 17	Poundage from Joseph Toupin, pilot, on SS. "Bonavista," from Quebec to Sorel, on 8th September.	1 64	do	5	do	Widow Olivier Raymond, Montreal.	75 00
do 29	Trinity dues for November from collector H. M. Customs, Montreal.	306 84	do	6	do	Old Pilot Joseph Leveillé	37 33
Dec. 2	Trinity dues from collector H. M. Customs, Sorel, collected at that port, from 24th April to 31st October, as per detailed statement, namely:— \$100 81 Less—Cost of bank draft on Montreal. 0 26	100 55	do	6	do	do Zéphirin Mayrand, Contrecoeur.	37 33
do 10	Trinity dues from collector H. M. Customs, Three Rivers, collected at that port, from 28th May to 18th October, as per detailed statement.	34 01	do	6	do	do Edouard Naud, Sorel.	32 00
			do	6	do	do Eusebe Toupin, Three Rivers.	32 00
			do	6	do	Old Pilot Adolphe Lise, Batiscan.	75 00
			do	6	do	do Onesime Naud, Sorel.	75 00
			do	6	do	do George Raymond, Deschambault.	75 00
			do	21	do	Widow J. L. Dessureux, Sorel, the amount which would have been due her late husband, he having died on 9th July. (See Board minutes of 5th August.)	75 00
			do	27	do	Wulf & Co., amount of poundage received on 2nd August from pilot Norbert Arcand, the same amount having been called for, by the Custom House and paid in on 26th August by Wulf & Co.	1 85
			do	31	By	Pensions paid to the following for three months ended 31st October:—	
			Oct.	31	do	Widow Hubert Lenay, Montreal.	37 33
			Nov.	3	do	do Olivier Abelle	37 33
			do	4	do	do Edouard Naud, Sorel.	32 00
			do	4	do	Old Pilot Joseph Leveillé, Montreal.	75 00
			do	4	do	Widow Zéphirin Boudreau, Three Rivers.	37 33
			do	4	do	do Edouard Boudreau	37 33
			do	4	do	do Isate Beaudry, Sorel.	37 33
			do	4	do	do L. David Bouillé, Deschambault.	29 00
						Carried forward.	

Cr.

ALEXANDER ROBERTSON, Treasurer, in account with the Decayed Pilot Fund—*Continued.*

Dr.

1890.	Brought forward.....	\$	cts.	1890.	Brought forward.....	\$	cts.		
Dec. 13	To Poundage from Messrs. Price Bros. & Co., Quebec, per Montreal pilotage agent there, on the following vessels:— Bark "Skiblander," Quebec to Batiscan. \$0 65 do "Progress" 1 12 do "Dilbhier" 0 97 do "Comorin," Quebec to Batiscan and from Batiscan to Quebec. 2 62			Nov.	By pensions paid to the following for three months ended 31st October:— do Narcisse Bouillé (née Marie Anne Arcand), Deschambault 37 33 Widow Narcisse Bouillé (née Hortense Proulx), Deschambault 37 33 do Severe Bellisle, Deschambault 37 33 do Placide Gaillardet, St. Grégoire 37 33 Rev. Chas. Z. Garceau, St. Pierre les Becquets, being Widow Hector Hamelin's pension, she having died on 12th October 37 33 Widow David Mathieu, Grondines 33 00 do Zéphirin Mayrand, Contrecoeur 37 33 do Eusebe Toupin, Three Rivers 32 00 do Jos. L. Desureau, Sorel 37 33 Old Pilot J. B. Dorval, Cap de la Madeleine. 75 00 Widow Adolphe Lisé, Batiscan, pension which would have been due Old Pilot A. Lisé, he having died on 13th October 75 00 Old Pilot Onésime Naud, Sorel 75 00 do George Raymond, Deschambault 75 00 Postage on pensions remitted 6th Aug. and 5th Nov. by registered letter, namely, 32 in all, at 8c. each. 2 56 Widow Olivier Raymond, Montreal, three months' pension to 1st Nov. 37 33 Harbour Commissioners of Montreal, for two Montreal Harbour Debentures, series "G," of \$1,000 each, at 101 net (Ex. Coupon due 5th Jan., 1891). 2,020 00 Balance to January, 1891. 1,071 32			Total..	7,178 97

We hereby certify that we have examined the foregoing entries for the year 1890 and found them to agree with vouchers on file; also that debentures and certificates covering the sum of \$48,071.32, as described in statement on next page, have been this day submitted for our inspection.

RIDDELL & COMMON, Auditors.

MONTREAL, 2nd January, 1891.

ALEXANDER ROBERTSON, Treasurer, in account with the Decayed Pilot Fund—*Con.*

Nos.	Series.	Statement of the Fund.	\$	cts.
<i>Montreal Harbour Debentures.</i>				
154-156.	M.	Due 5th January, 1894; interest, $6\frac{1}{2}$ per cent. = $3 \times 1,000$	3,000	00
36-43.	N.	do 5th July, 1894; interest, $6\frac{1}{2}$ per cent. = $8 \times 2,000$	16,000	00
81.	P.	do 5th do 1896 do 6 do = $1 \times 2,000$	2,000	00
20 and 102.	R.	do 5th do 1906 do 6 do = 2×500	1,000	00
117-119.	R.	do 5th do 1906 do 6 do = $3 \times 1,000$	3,000	00
21 and 45-49.	D.	do 5th do 1915 do 5 do = $6 \times 1,000$	6,000	00
164-172.	F.	do 5th do 1917 do 4 do = $9 \times 1,000$	9,000	00
189-190.	G.	do 5th do 1918 do 4 do = $2 \times 1,000$, without current coupon for six months' interest due on 5th January, 1891.....	2,000	00
<i>City of Montreal Consolidated Fund.</i>				
165.	.....	Due 1st July, 1910; interest, 5 per cent. = 50×100	5,000	00
		Cash in Montreal City and District Savings Bank at 3 per cent. interest.....	\$2,432	56
		LESS—Cheque on the account dated 5th January, 1891, in the hands of the Harbour Commissioners of Montreal, being balance of payment for two "G" bonds.....	1,361	24
		Total.....	48,071	32

ALEXANDER ROBERTSON,
Treasurer.

MONTREAL, 31st December, 1890.

APPENDIX No. 20.

STATEMENTS AND EVIDENCE SUBMITTED BY THE HON. P. MITCHELL, MINISTER OF MARINE AND FISHERIES, BEFORE THE PARLIAMENTARY COMMITTEE ON BANKING AND COMMERCE, ON THE 18TH DAY OF APRIL, 1873, IN RELATION TO A BILL ENTITLED "AN ACT RESPECTING DECK LOADS," REFERRED BY PARLIAMENT TO THAT COMMITTEE FOR ITS CONSIDERATION AND REPORT.

MR. CHAIRMAN,—The Bill which has been referred to you by Parliament, and which you have now under consideration, is one of vital importance to the character and reputation of our country. It is a Bill of such a nature that, while I freely admit that it places some restriction upon trade, it will at the same time give additional security to life and property; and so intimately is the matter connected with the trade of our country that Parliament has been asked to consider the question and pass a measure of the nature of that now under the consideration of the Committee.

I feel that in submitting this Bill I may, in some measure, affect a trade in which, above all other portions of the Dominion, my own Province is most concerned, and one in which, from its extent and character, the mercantile community of the leading commercial city of the Maritime Provinces is most deeply interested. I feel also that the opposition which was given to this measure, by the able gentleman representing the City of St. John, upon this most important question, when it was introduced into Parliament, demands from me the fullest explanation, and that the position I have assumed in advocating the measure ought to be sustained by evidence and proof satisfactory to the minds of this Committee.

This Bill may be considered as dealing with two distinct trades. The first part of it with the transatlantic wood trade, and the second with the West India wood trade; and the provisions which I have thought it desirable to submit, in dealing with these two trades, differ to some extent.

Previous to the year 1840 many representations had been made to the British Government that owing to the large deck loads of timber carried from the North American Colonies to the United Kingdom during the winter months, great suffering and loss of life had been occasioned amongst the crews of ships laden with timber and wood; and an enquiry was instituted by the British Government as to the truth of these representations.

A number of persons connected with the trade of British North America were examined on the subject, and the result of the enquiry was that a Bill entitled "An Act for regulating the carriage of cargoes of timber for one year," was introduced into the Imperial Parliament and became law, 5th and 6th Vic., Cap. 17.

In the commencement of that Bill it is recited that "great loss of life, and "severe sufferings have been occasioned among the crews of ships and vessels laden "with timber and wooden goods from the ports of British North America, from the "practice of having a portion of the cargo of such ships stowed on or above deck"; and the Bill then proceeds to interdict the carriage of such deck loads, so that it would appear that it was not for the purpose of protecting property that the Bill was passed, but entirely for the purpose of protecting life and saving the crews of such ships from suffering.

These provisions were continued by the Imperial Act 8th and 9th Victoria, Cap. 45, and were repealed by Cap. 84, but again re-enacted by Cap. 93, of the same session. They were again embodied in the Imperial Act 16th and 17th Victoria, Cap. 107, and continued in force until the 29th July, 1862, so that the provisions of the Deck load Law were in operation about twenty years, and were generally admitted by seafaring men, to have been productive of much benefit, and to have greatly reduced the fatal casualties of the sea.

By this law all vessels clearing from any ports in British North America, for ports in the United Kingdom, were absolutely prohibited from carrying any cargo on deck, after the 1st September and before the 1st May, leaving only four months in which vessels were allowed to carry deck loads.

The law allowed, however, the carriage on deck, of spare spars or other articles necessary for the ship's use, and the Commissioners of Customs gave instructions to their officers to interpret this permission to mean a duplicate of every spar in the ship, except the lower masts and bowsprit, and that such spars might be taken in the rough. The consequence was that a full-rigged ship generally carried forty-two rough spars, some of them of large size, suitable for main yards when dressed down, and some of them of dimensions fit to make smaller yards and top-masts. A barque could take thirty-six spars, and a full-rigged brig about twenty-six. This was, no doubt, an abuse of the law, and was never contemplated by the original framers of it. They intended that spars, which might be needed to meet contingencies or accidents to the vessel, should be carried, not that comparatively an unlimited number for purposes of trade and of any size should be taken, as was done in many cases, by those who desired to evade the law.

The practical working of the permission to carry spare spars resulted in an evasion of the law, and the deck cargoes of spars usually carried by vessels in the winter time, amounted to a pretty heavy deck-load, and of a very dangerous description, as the spars were generally rough and wet out of the ponds, very heavy and very long, and in the event of the vessel getting on her beam ends, they were generally more dangerous than deals, as in a very short time they would tear to pieces the rigging and top work on deck.

In the year 1861, when the differential duties between British and Colonial timber and deals were repealed, the owners of vessels clearing with cargoes of deals from St. John, New Brunswick, soon found out that a British Colonial clearance was of no value to the vessels, as, on their arrival in the United Kingdom, it made no difference as regarded the cargo, whether it was a British, Colonial or Foreign production, and in order to avoid the Deck load Law, shippers from the Bay of Fundy, in many cases, loaded their vessels with deck-loads after the 1st September and proceeded to Eastport in the State of Maine, entered their vessels there and took a clearance for the United Kingdom, as there was no law in the United States to prevent them carrying deck loads. This evasion of the law could not be practiced in the St. Lawrence, but was confined entirely to Bay of Fundy ports. The subject was brought under the notice of the British Government by the Controller at St. John, and on being asked what he would recommend in lieu of the Deck Load Law, as it then stood, he consulted many shipmasters, ship-owners, and the members of the Chamber of Commerce of St. John, and found that all interests would be satisfied with permission to carry, during the winter months, a deck load of deals or sawn lumber (but no timber or rough spars) to the extent of three feet in height, and if permitted to do this they would not go to a foreign port for a clearance. As this deck load would not be of that excessive character which would imperil the safety of the ship or the lives of the crew, it was recommended for adoption. I believe a measure of this kind was proposed by the British Government, and circulated amongst the ship-owners of the United Kingdom, but as many of them were of opinion that it was a question which should be left between the underwriters and ship-owners, the Bill was not introduced into the House of Commons, and on the 29th July, 1862, an Act to amend the Merchant Shipping Act 55, and the Customs Consolidation Act, 53, was passed by the Imperial Parlia-

ment, and in a schedule of that Act, the sections relating to deck-loads (viz, 25 and 26 Victoria, Cap., 63, sections 170, 171 and 172 of 16 and 17 Victoria, Cap. 107) were simply repealed and nothing was submitted in their places. This, in my opinion, resulted mainly from a feeling which had grown up among the shipping interests of the United Kingdom and British America, that the old law was too restrictive and prohibitory, and, as frequently happens, the other extreme, the withdrawal of all restriction, was adopted.

Since that period vessels carrying cargoes of timber and deals, have as a general rule, carried heavy deck loads, and it appears that serious losses have annually occurred.

In a paper on the subject of deck loads, read before the Dominion Board of Trade in January last, by its able President, Mr. Henry Fry, it is stated that forty-nine sailing vessels, bound from the St. Lawrence to the United Kingdom, were lost on the voyage, forty-two of which were laden with wood, six with grain and flour, and one with fish, and he believed that fully three-fourths of all the losses of wood-laden ships in the North Atlantic, in the fall of the year, might be traced directly or indirectly to the practice of carrying deck loads.

He stated that most of the Quebec ships which reached Great Britain last fall, were those which either took no deck loads, or lost the whole or part of them by throwing them overboard when the ship began to labour or get into trouble.

Of the forty-two timber-laden vessels which were wrecked, he stated that only one left the St. Lawrence without a deck load, and that thirty-five of them were waterlogged in the Atlantic and abandoned.

With the permission of the Committee I will read Mr. Fry's very able paper.

DECK LOADS.

*A paper read before the Dominion Board of Trade at Ottawa, January, 1873,
by Henry Fry.*

"When I state that during the season of 1872 no less than 62 large sailing ships and 9 iron steamships, all engaged in the lumber and grain trades between the St. Lawrence and Great Britain, have been totally lost; that the value of these vessels, their cargoes and freights amounts to over four millions of dollars, and above all, that over 250 valuable lives have been sacrificed, I have said enough to prove that the subject is one demanding the careful attention of this Board and of the Government of the Dominion. Can the loss of any of these ships be traced to preventible causes, and can anything be done by legislation or otherwise to prevent such a lamentable sacrifice of life and property in the future? These are the two questions I propose briefly to discuss in this paper. It is somewhat remarkable that of the 62 sailing ships only 13 were wrecked on their outward voyage, no less than 46 being homeward-bound; whilst of the 9 steamships 2 were outward-bound and 7 homeward. I dismiss the outward-bound ships at once, most of them having been lost by lee or fog, and turn to the homeward-bound ships, over which our Government can alone exercise control. Of the 49 sailing ships, 42 were laden with wood, 6 with grain and flour, and one with fish. Primarily, of course, the terrific gales of 8th, 18th and 28th November will account for the loss of the greater portion of those homeward-bound ships, and for the disproportion between the loss of ships on the outward passage as compared with the homeward; but a close acquaintance with the North American trade for the past thirty years has convinced me that *fully three-fourths of all the losses of wood laden ships in the North Atlantic in the fall of the year, may be traced directly or indirectly to the practice of carrying deck-loads*, and the facts I have been able to collect with reference to recent losses confirm me in this opinion.

"Most of the Quebec ships that reached Great Britain last fall were those which either wisely took no deck-loads, or lost their deckloads, either in part or the whole, by throwing them overboard when the ship began to leak, or allowing them to be washed overboard; whilst of the 42 wrecked ships, so far as I have been able to

ascertain the facts, *only one left the St. Lawrence without a deck load*, and 35 were abandoned in the Atlantic waterlogged. The harrowing details of these wrecks conclusively show how much deck loads contributed to the loss, and the various ways in which they bring about the destruction of ships and their crews. Most of the ships engaged in this trade are necessarily second-class ships, many of them having seen their best days, and some of them not too well found. They are, too, peculiarly unfitted for deck loads, from the fact that most old ships are weak in their upper works from decayed iron fastenings, and defective frames and beam arms. As soon therefore as a ship begins to roll in a heavy sea she strains and leaks, and the deck-load causes her waterways to open; if the pumps are good and the crew can stand at them she may possibly escape; but far more frequently when the pumps are most needed they are least available; a sea breaks on board; the deck-load gets adrift, the sailors get their limbs broken or they are killed by loose logs in trying to get them overboard; or the pumps are broken off at the deck by loose timber washed about, and thus rendered useless; the ship becomes waterlogged, provisions and fresh water are destroyed, and the unhappy crew take to the rigging or the tops, there, alas! to freeze or perish, amid the horrors of starvation, cold and delirium. Impressed by these facts, the British Legislature, some 33 years ago, passed an act prohibiting all vessels clearing at ports in British North America for ports in the United Kingdom from carrying deck-loads after the 1st September or before the 1st May in each year. I venture to say that 99 out of every 100 seamen engaged in the trade hailed the Act as a great boon, and that during its existence it saved the lives of thousands of British seamen. Most unfortunately, as I think, in 1862, by a simple clause in a "Customs Consolidation Act," this beneficent law was summarily repealed, and to this day I have never heard any valid reasons given for its repeal. I know that the British Government have a theory that all such interference with trade, all inspection of ships, &c., is unwise, because it throws the responsibility off the shoulders of those who ought to bear it, and casts it upon the inspectors, and this is true within certain limits; but I deny altogether that it is valid where human life is concerned. Mark how carefully the Government insist on the inspection of emigrant ships before they are allowed to sail, and of all steamships before they are permitted to carry any passengers. In various ways all civilized governments seek to protect their subjects from the consequences of the wilful carelessness, neglect or greed of their employers. The only other reason I have ever heard given was that some American shipmasters had evaded the law by first clearing without a deck load at St. John, N.B., and then taking one on board at Eastport, it being brought by lighters from St. John. This, however, could have been easily cured by a penalty imposed at the port of discharge. Ask any intelligent seaman what he thinks about deck loads, and he will reply: "Ships are not built to carry deck loads, and it would be a good thing if they were prohibited by law; but if So-and-So carries one, I must do so, or I shall probably lose my situation." But some of my commercial friends may say; "This is not a matter that affects us; it is a matter for the English shipowners and underwriters to settle between themselves, and if you must have an 'Act of Parliament' you should go to the Imperial Parliament for it." Now this is a very mistaken view of the matter. Who will pay these four millions of dollars lost in 1872? Not the underwriters ultimately, for in the average of years most of them make a profit out of the business and not a loss, and they are but a medium for collecting a tax from the fortunate for the benefit of the unfortunate; not the shipowners, for in many cases they are fully insured. No, the loss will be borne either by the producer or consumer of what we have to export, or what we require to import, in the shape of increased premiums of insurance or rates of freight. It is plain enough that if the value of Canadian wheat or Canadian lumber is regulated by its value in the markets of Great Britain, where they have to compete with the products of other countries, then whatever is paid in increased cost of insurance or freight must come out of the pockets of the producer; and thus every Canadian farmer and every Canadian lumberer is interested in the question.

"Our fall premiums of insurance do, in fact, kill a great deal of our fall business, or render it unprofitable. Sir, I do not come here to plead for either shipowners or underwriters; I have no great amount of sympathy with either; as they are able as a rule to take care of themselves, the former owe their losses to their own cupidity, in very many instances, and, as I said before, generally protect themselves by insurance; whilst the latter by a single line inserted in their policies could prohibit deck loads altogether. But I plead for this law in the name of humanity, in the name of the thousands of poor sailors who every year flock to our shores, and who are bound by a rigid legal instrument to stick to their ships and do their duty, though death stares them in the face; and who, once having 'signed articles' have no right to object to any amount of deck load that may put a few pounds in the shipowner's pocket, although it may, and often does, increase the sailor's risk tenfold, unless it is prohibited by law. I plead for it in the name of the hundreds, perhaps thousands, of widows and orphans who are deprived of their natural supporters and cast upon the world in poverty and wretchedness for lack of the protection which every sailor has a right to expect in his perilous calling. I trust this Committee will pass unanimously the resolution I have had the honour to propose, and that Parliament will during the present Session pass a Bill to restrict within reasonable limits the carrying of deck loads. It is necessary that I should say a few words with reference to the 7 steamships which are believed to have been lost last fall. One ran ashore in a fog; another capsized near Sydney, C. B., with the loss of 8 lives; a third capsized near St. Paul's, with the loss of all her crew save one; the other 4 have never been heard of, but are believed to have been lost in the same way, and that every soul on board has perished. Neither of these 7 vessels belonged to our regular lines; all were loaded with grain in bulk, and all were very deeply laden. They were all boats of small power, but large carrying capacity. The grain being in bulk and loaded very rapidly by elevators naturally shifted at sea, and with a heavy roll it would continue to shift and re-shift, and cause the ship to capsize. This I believe to be the cause of the loss of these vessels. Now, in relation to the St. Lawrence grain trade there is a Port Wardens' Act for Montreal, where these ships were laden, containing provisions which have proved inefficient for the prevention of such catastrophes. The officer appointed to see them carried out reported the necessity for a change in the laws and the passage of more restrictive measures. The penalty for evading the provisions of the existing Act is \$40. I believe I am correct in saying that all these vessels paid the fine, and refused to obey the Port Warden's orders, with the result above stated. The Act has been so amended as to provide that no grain-laden vessel shall be allowed to clear without producing to the collector a certificate from the Port Warden that the law has been complied with; and in addition thereto the penalty has been so increased as to make it unprofitable to the shipowner to avoid the law. This class of vessels is likely to increase in number, and do a large share of the grain business of the St. Lawrence. It is therefore important that the Port Warden should have the necessary power to protect the lives of the crews and passengers as well as the property of the shippers, and the amendment to the existing law is a step in the right direction."

In this paper Mr. Fry has dealt entirely with the transatlantic trade, and has made recommendations very much of the same nature as those contained in the Bill originally passed by the British Parliament in the year 1840, and I must say that, while I agree in the main with the views entertained by Mr. Fry in relation to the abuses of the trade and the necessity for some legislation, and while I appreciate and value the statements made by a gentleman at the head of the United Boards of Trade of Canada, and one who possesses such great experience as Mr. Fry does, I nevertheless feel that the extreme character of a measure which would prevent entirely the carrying of deck loads during the periods he has named, viz., between the first day of September and the first day of May, is so prohibitory in its character that it would create a feeling that the trade had been unnecessarily restricted.

I cannot agree with Mr. Fry that all deck loads are a positive evil and calculated to endanger shipping. On the contrary, I think that a moderate deck load, if composed of deals, which, as we know, are easily handled in case of difficulty, instead of endangering the vessel, may, in very many cases, increase her seaworthiness; and it is contended by many who have spent a life-time in the trade that with a moderate deck load such is the effect in nine cases out of ten. Much, however, will depend on the build of the vessel.

I was much struck with the remarks of my hon. friend, Mr. Coffin, the member for Shelburne, who has had an experience of 30 years as a shipmaster, and the frankness and fairness which he exhibits on all occasions gives weight to his testimony and value to his views. I quite agree with him that in a great many cases, if not in all, a moderate deck load, so far from injuring a ship, has a tendency rather to make her more sea-worthy than otherwise. Hon. gentlemen admitted the force of his illustration when it was discussed in Parliament, and I have chosen to adopt the moderate views which he has taken—views acquiesced in by those who have had practical experience in the trade, of permitting a moderate deck load, rather than the extreme view recommended by Mr. Fry in his able paper, and for that reason I have proposed in the Bill that from the 1st day of October until the 16th day of March deck loads might be carried to a height of 3 feet on transatlantic voyages; you will perceive that this shortens the time of prohibition. It may be asked why this was done. My answer is, that from the best information I could gather from sea-faring men, shipowners, shippers and others (and this experience should command the attention of public men) the limitation named in the Bill is not an unreasonable one, that the passage of the Act is a desirable measure, and considering, as I think we ought to do, the manner in which it may affect the great staple trade of our country, as well as the promotion of greater security to life and property, I think the limitation is one more likely to attain all the objects to which I have alluded than if the measure were more prohibitory.

No restriction has hitherto been placed upon vessels carrying deck load cargoes to the West Indies, although for some years past the practice has been adopted of carrying very heavy deck loads from St. John and other ports in the Lower Provinces. During the winter months the deck loads of lumber, or wet sugar-box shooks, which were carried to the West Indies from ports in New Brunswick and Nova Scotia, were frequently piled several feet above the rail, and it became very dangerous for men to walk on them, and extremely difficult to manage the vessels, more particularly if they became iced, as they generally do in our severe winter weather, and in consequence many vessels have been lost and many lives sacrificed.

In April, last year, the British Consul General at Havana brought the subject under the notice of the British Government, and stated that many vessels coming from North American ports, especially from St. John, N.B., were overloaded, and consequently both ship and cargo ran extraordinary risks, and the lives of those on board were endangered, and he recommended that such vessels should undergo some kind of inspection, and that there should be some stringent regulation on the subject of deck loads generally. This letter was referred, by the British Government, to the Government of Canada, for their consideration.

I will, therefore, now proceed to review the second branch of the Bill which may affect the trade with the West Indies, and I may state at the outset that I have not included in this, for reasons hereafter to be named, the trade between Canada and the United States, which may be considered more in the light of a coasting trade. The trade of our country with the West Indies is mainly carried on from the Southern shores of New Brunswick and Nova Scotia, and especially during those portions of the year when the navigation of the St. Lawrence is closed. The trade from the markets of the St. Lawrence and other portions of the Province of Quebec with the West Indies is comparatively limited in its character, and, from climatic reasons, is confined to the six or eight weeks before the closing of navigation. Therefore, the conditions of this portion of the Bill are of secondary importance to the people of Old Canada; hence the total absence in Mr. Fry's paper of any reference to that trade.

The trade from the ports in the Bay of Fundy, which mainly centres in the leading port of St. John, is principally carried on in a class of vessels differing considerably from those in which the transatlantic trade of the St. Lawrence is done, and from the return which I hold in my hand, and which, with the permission of the committee, I will read, it will be seen that the average height of the deck-loads, which are carried to the West Indies is about $5\frac{1}{2}$ feet, but they vary very much, rising as high as 9 feet and going down to 2 and 3 feet, and in some cases to none at all.

DECK LOADS—FEBRUARY, 1873.

Rig.	Name.	Reg. Tons.	Port of Registry.	Nature of Cargo.	Where Bound.	Deck Load.
						Feet.
Schooner	Active	131	St. John, N. B.	Boards	To Matanzas, Cuba	$4\frac{1}{2}$
do	J. W. Scott	109	do	do	To Providence, U. S.	8
Brig.	John Good	343	Digby, N. S.	Sugar shooks	To Cuba, about 12 tier	$5\frac{1}{2}$
	Nellie Scott	296	Eastport, Me.	Pine boards and shooks		
Schooner	George Calhoun	109	St. John, N. B.	Boards & empty oil brls., highest cargo took was 8 feet	To Portland, Me., about	6
Schooner	Lizzie Dewey	374	Lubec, Me.	Shooks	To Cuba	
do	W. E. Heard	587	Yarmouth, N. S.	do	do	3
Bark	Angola	122	Parrsboro', N. S.	do	do	$3\frac{1}{2}$
Brigantine	Roswell	234	Eastport, Me.	do	do	$4\frac{1}{2}$
Schooner	Harold	882	Halifax, N. S.	Deals	To Liverpool, under	$5\frac{1}{2}$
Bark	Vestr.	132	St. John, N. B.	Boards	To Cuba	3
Schooner	Mary E. Thompson	171	Boston, Mass.	do	do	$5\frac{1}{2}$
do						7
						$55\frac{3}{4}$
						5 3-11
Barque	John G. Hall	326	Digby, N. S.	Shooks	To Cuba, 14 tiers	$6\frac{1}{2}$
Brigantine	Chimborazo	181	Boston, U. S.	Shooks and boards	To Cuba	$5\frac{1}{2}$
Barque	Delta	445	Norway	Deals, &c.	To Great Britain	3
Schooner	Ida J.	93	St. John, N. B.	Boards, &c.	To Boston, U. S.	$5\frac{1}{2}$
Brigantine	Lulu	299	do	Shooks and boards	To Cuba	6
do	Magdala	205	do	do	do	$5\frac{1}{2}$
Schooner	Ada Louisa	76	do	Boards	To Pawtucket	8
do	R. A. Ford	114	do	do	Providence, R. I., this vessel, master says, has taken 10 feet	7
Schooner	Bessie Black	207	St. John, N. B.	Boards	To Cuba	7
do	Irving	106	United States	Shooks	To Cuba, 13 tiers	6
do	S. B. Hume	335	do	Boards	To Cuba	5
Ship	Parkfield	1389	St. John, N. B., pass	Timber and deals	To Liverpool	5
Barque	Colorado	682	Yarmouth, N. S.	do	To Dublin	5
do	Sirian Star	610	do	Deals	To Londonderry	$4\frac{1}{2}$
Schooner	Lizzie Irwin	171	St. John, N. B.	Shooks	To Matanzas, Cuba, 13 tiers	6
Barque	Abbie Thomas	590	Nova Scotia	Deals	To Great Britain	$4\frac{1}{2}$
Schooner	Arcilla		St. John, N. B.	Shooks	To Portland, Me., 13 tiers	6
do	George V. Richards	136	do	Boards	To Cuba	6
do	Anna Currier	104	do	do	To Boston	7

5 1-2

In measuring *carefully* I find that 7 tiers of box shooks, gives 3 feet 2 inches in height.

Most of the coasters would prefer to have their deck load (if they carried any) to reach above the rail, as any space on the deck would hold water or ice if in the winter.

J. BAKER.

Customs, St. John, N.B.,
28th February, 1873.

By the return it will also be seen that this great variation in the height of the deck-loads does not depend upon their ships, as we find that a ship of 125 tons carries, in many cases, more deck load than one of 300 tons, the one being less than half the size of the other, and to this trade I propose to apply the prohibition in relation to deck loads, commencing on the 15th November and ending on the 16th March. I do not propose to restrict it in any way between these dates. I propose by the Bill that vessels in this trade be allowed to carry deck loads during the period of restriction to the height of not more than six inches above the main rail. Under the original Bill it was limited to the main rail, but at the suggestion of gentlemen practically acquainted with the trade I have consented to the additional 6 inches, as I am informed it tends to secure the lashings and gives additional security to the cargo and further, no deck load is to be more than 4 feet 6 inches above the main deck.

When I look at the returns which I hold in my hand, showing what are the deck loads usually carried, I own I think the measure which I have submitted should not be looked upon as restrictive, but one most liberal in its character. I regret, however, that the representatives to whom I have referred from that section of the country which most extensively carries on this trade fail to view the matter as I do, and under instructions, no doubt from some of the leading gentlemen in this trade are opposing the Bill now before the Committee.

It will be asked, and indeed has been asked in another place by gentlemen opposed to this Bill, why it is that I have not dealt with the deck-load business from the Bay of Fundy to the United States. I may state in reply that while I am not prepared to say that it ought not to be dealt with, my desire was mainly to get a Bill passed which would strike at the great abuses in the trade, and I knew from the important interests involved in the coasting trade with the United States it would simply add more opposition to the passage of the measure than that already created. And again, I felt that there was a very great difference between the dangers to be avoided in the two classes of trade; that to the West Indies was a long voyage—an open sea voyage—and one in which they could not do as they can in the coasting trade to the United States, viz.:—make harbour any time within two or three hours. Therefore, I concluded that, as the statistics which I have been enabled to gather did not show a very large percentage of loss of life in the American trade, and as the facilities—perhaps the best in the world—for running into harbour along that coast are so great, I did not desire either to create unnecessary obstructions or to cause further opposition to the passage of this Bill than that which already exists, and which, I admit, is of great weight and importance. It will be observed that the present Bill limits the power of unscrupulous men, and affects the profits they can make at the sacrifice of human life, but does not interfere with the honest shipowner, inasmuch as the 4½ feet allowed in the West India trade is more than a fair average of the deck loads which, without any legal restriction, conscientious shipowners even now permit, and that the business of the fair trader will be but little affected by it; and besides, there is something in the position assumed by the Council of the Board of Trade of St. John, viz.: that until the American Government legislate in a similar way it would be unwise to place our own people at a great disadvantage in pursuing that trade. It may be alleged that the same argument will apply to the West India business. My answer to that is, that in that trade I have actual statistics, amounting to positive proofs, of the enormous loss of life resulting from excessive deck loads, while in the other, though accidents occur and danger exists, the fatal casualties have been much less frequent. The remedy I propose upon the latter point in connection with our trade with the United States, is that the attention of the British Government should be called to this state of the question, and that they should be asked by the Government of Canada to bring the action of our own Parliament under the notice of the American Government and invite legislation in the direction which this Bill proposes, with the view of also restricting and regulating deck loads in relation to the existing Trade. And I do not doubt that, when so enlightened a people as the Americans are, see the necessity

of adopting some, if not exactly the same, remedy that we have proposed, they will take such measures as seem to them just and right to protect life and property, without materially affecting the prosecution of that trade.

When the propositions of this Bill were discussed in Parliament, prior to its being referred to this Committee, several objections were presented by the gentleman who so ably opposed it. I will notice these in detail, with a view of satisfying the Committee as to the amount of reliance to be placed upon them. It was stated by the hon. gentleman, the member for the County of St. John, Mr. Burpee, that no evidence had been adduced in support of the position that heavy deck loads involved loss of life, and it was claimed by that hon. gentleman that the class of vessels which carried on the trade with the West Indies was built expressly for that trade, and it was expected in their construction that they should be fitted for carrying deck loads and that they were unlike the ships which carried on the St. Lawrence transatlantic trade, many of which were old, rotten and condemned vessels.

Now, in reply, let me say that I think the hon. gentleman has not given the subject that attention, nor perhaps had at his command the means of information which I have endeavoured to secure, and which would have enabled him to judge with the same accuracy. Let me read, for the information of the Committee, the summary of casualties to vessels sailing from St. John, N.B., to the West Indies, caused by deck loads during the past few years; and I may say that I do not pretend that these are all the casualties that have occurred, nor that they are even a very considerable proportion of them, as I did not anticipate so much opposition to this measure, which, in my opinion, is so liberal to the shipping interests, and I am, therefore, not so well fortified by the facts as I might otherwise have been; but, Sir, the list, defective as it is, is an appalling one. By this it will be seen that that gentleman is in error when he alleges "that comparatively few lives have been lost in 'the trade and that the percentage of loss of life in the West India deck-load business 'is as small as that in any other trade conducted on land.'"

SUMMARY of Casualties to Vessels, occasioned by deck loads during the past few years, while sailing from St. John, N.B., to the West Indies.

1. Brigantine "Evergreen"; waterlogged, deck load carried away, vessel condemned.
2. Bark "Minnie": one man washed off deck load and lost.
3. Brigantine "Active"; lost deck load and otherwise damaged.
4. Brigantine "Mohawk"; hove on beam ends, righted on throwing over deck cargo.
5. Brigantine "Osprey"; lost part deck load; a man named John Alcocks wash overboard and drowned.
6. Brigantine "G. A. Coonan"; a seaman lost off deck load.
7. Bark "Edward Cecil"; thrown on beam-ends, waterlogged and abandoned. Carpenter washed overboard. Rest of crew exhausted pumping.
8. Brigantine "Fawn"; deck load lost. Crew lived on top of house till the vessel reached Nassau full of water.
9. Brigantine "Delano"; put into Norfolk full of water and sold.
10. Brigantine "Let Her B"; total wreck on Pacific reef.
11. Brigantine "Ella"; heavy deck load shifting, had to put into port.
12. Brigantine "Marino"; leaking, deck load thrown overboard.
13. Schooner "Unexpected"; waterlogged.
14. Brigantine "Mary Given"; deck load lost, leaking.
15. Brigantine "Southern Cross"; stranded with heavy deck load. Waterlogged, and lost deck load, water casks, &c. Crew 9 days on deck starving. Killed ship's dog. Rescued.
16. Schooner "Alatia"; picked up derelict. Crew all lost. Enormous deck load washed off, taking crew with it.
17. Brig "Birdie"; never heard of.

18. Brigantine "Mary Kelly"; having heavy deck load, became waterlogged. Crew rescued by passing vessel.
19. Schooner "Nanta"; waterlogged, abandoned. Crew landed.
20. Schooner "Ambro"; unmanageable through heavy deck load. Total loss.
21. Bark "Ida E"; deck load lost. Crew's lives imperilled. Captain attributes disaster to excessive deck cargo; \$9,000 to repair.
22. Schooner "Minnie"; heavy deck load. All lost. Never heard of.
23. Schooner "Carrie Douglas"; waterlogged and unmanageable. Repairs cost over \$4,000.
24. Brigantine "Bessie"; unmanageable and driven on rocks. Captain washed overboard and drowned, crew barely escaping with their lives.
25. Brigantine "John Lewie"; heavy deck load washed away. Crew had a narrow escape.
26. Brigantine "Martha"; drifted ashore derelict. Part of deck load gone, which was unreasonably large. Crew been evidently washed overboard and had perished.
27. Brigantine "Phoebe Ellen"; encumbered with heavy deck load which had frozen. Crew unable to relieve the vessel. Captain and two or three of the hands perished.
28. Schooner "Charles A. Bovey"; heavy deck load of shooks. Sprung a leak. Two men died from over-exertion and exposure in keeping vessel from sinking. Rest of the crew completely worn out. Towed into port, shipped new crew, proceeded on voyage. Result not yet known.
29. Brig "Scud"; high deck load. Became total wreck.
30. Brig "Victoria"; deck load 3 feet higher than main rail. Waterlogged. Crew rescued. Overloading cause of disaster.
31. Schooner "Bessie Black"; high deck load. Part of it lost, carrying a man with it, who was drowned.

As to the difference in the character of the vessels engaged in the West India and transatlantic trade from the Bay of Fundy, I freely admit there is something in what the hon. gentleman states; but, under any circumstances, and admitting his premises, there still stands before me the list of casualties I have just read, which applied, not to the St. Lawrence trade, but to that of the West Indies from the Bay of Fundy. But he has asked greater latitude and exemption than was claimed by the delegates who represented the Board of Trade of his city. The delegates of that Board attended the Conference of the Dominion Board of Trade at Ottawa, and when stating their objections to the deck load law, contended, not against the limitation on the transatlantic deck load law, but asked only to have their West India and American coasting trade excepted; and they then contended, not against the principle of the deck load law, as is now done, but claimed that until a similar law was adopted in the United States the trade from their ports was placed at a disadvantage, and, therefore, should not be interfered with. Now, hon. gentlemen ask that the passage of the Bill may be postponed, and contend that there is no reason why any prohibition should be placed upon the trade of the port of St. John, because, as they allege, the vessels are of a different class from the St. Lawrence vessels. It may be that the gentlemen are right in their views in relation to the stable character of the vessels of New Brunswick and Nova Scotia, and I fully endorse the high character given them—but that does not alter the fact that the experience of years has shown that accidents innumerable have occurred in other ports besides those of the St. Lawrence, arising from the carrying of deck loads, and that even when vessels are strong and seaworthy an excessive deck load is dangerous. And it must be recognized that although the position of merchants may be affected (a positive evil like that I have described in the West India trade having been so conclusively proved, as I have proved it to exist), we cannot permit any consideration to stand in the way of a measure for the security of life, and for lessening the number of accidents. In other words, the first duty of Parliament in this question should be to secure the life and safety of the seamen, and then consider questions of trade.

That very many of the ships trading from the St. Lawrence, defective, aged and unfitted for the business, have deck loads put upon them, simply aggravates the evil, and is an additional reason why the Act should pass, but is no argument why St. John trade with the West Indies should be exempted. I presume it will not be disputed, after the evidence which I have adduced, that serious casualties do occur from overloading.

I would remind the hon. gentleman from St. John that, in going beyond what the Board of Trade asked in January last, and that in now asking this Committee to reject that portion of the law referred to affecting the trade of St. John, on the broad ground that no necessity exists for any deck load law from that port, I believe he scarcely represents the general sentiment even of his own city, and I would beg to say, when he tells this Committee that there is no public sentiment calling for such a measure, and that no such measure is necessary, that I think the hon. gentleman is wrong. I have already produced ample evidence to show the necessity for the measure, and I now assert that there is a public sentiment loudly demanding some security against the enormous loss of life which has arisen in this trade. One of the leading, if not the foremost of marine agents for New Brunswick, submitted, in March last, an able paper, addressed to myself, upon the subject of the trade of St. John in connection with the deck load question, which, with the permission of the Committee, I will read :

DECK LOADS.

To the Hon. PETER MITCHELL,
Minister of Marine and Fisheries,
Ottawa.

SIR,—At a recent meeting of the St. John Board of Trade, held in this city, the delegates who had just returned from the third annual meeting of the Dominion Board of Trade, held at Ottawa on the 16th and 17th of January, ultimo, reported among other matters as follows:—

"That the next resolution your delegates felt called upon to take an active part in was subject Nineteen. The propriety of prohibiting by statute the carrying of deck loads after a certain date, which was, in fact, the re-enacting of the deck load laws of years ago, and while the same might apply with equal fairness to ourselves and foreigners in the carrying trade to Europe, it might place us on unequal terms with the carriers of the United States, with whom we are in continual competition in the coasting trade—the trade to the West Indies and South America; and upon the case being fully explained to the Board, the mover, the chairman of the Board, Mr. Frye, confined his resolution as follows: that this Board strongly urges upon the Government of the Dominion the necessity of immediately putting a stop by legislation to the purpose of carrying deck loads between Canada and Europe after September and before the first of May in each year, as being destructive to human life, and materially increases the cost of insurance.—Carried."

Subsequently the following papers were read by the secretary of the Board:—

OTTAWA, 17th June, 1872.

SIR,—I have the honour to enclose herewith copy of despatch, with enclosures, from the Secretary of State for the Colonies, which has been referred by the Hon. Privy Council to this Department, in reference to the number of casualties occurring to vessels conveying deck loads of timber and shooks between North American ports and the West Indies; and I am to request that you be kind enough to submit it to the Board of Trade for their information, and at the same time inform that body that this Department will be glad to be favoured with their views on this important subject.

I have the honour to be, Sir,

Your most obedient servant,

WM. SMITH,

Deputy Minister of Marine, &c.

A. C. FAIRWEATHER, Esq.,
Secretary Board of Trade,
St. John, N.B.

The Secretary of State for the Colonies to the Governor General.

Copy—Canada. No. 108.

DOWNING STREET, 7th May, 1872.

My LORD,—I have the honour to transmit to Your Lordship, for communication to your Government, a copy of a letter from the Board of Trade, enclosing copy of a despatch from Her Majesty's Consul at Havana, calling attention to the number of casualties occurring to vessels conveying deck loads of timber and shooks between North American ports and the West Indies.

I have, &c.,

KIMBERLEY.

Governor General,
The Rt. Hon. LORD LISGAR, G.C.B., G.C.M.G.,
&c., &c., &c.

Mr. Gray to the Under-Secretary of State, Colonial Office.

Copy—M. 4758.

BOARD OF TRADE,
WHITEHALL GARDENS, 3rd May, 1872.

CASUALTIES.

SIR,—I am directed by the Board of Trade to transmit to you, for the information of the Secretary of State for the Colonies, the accompanying copy of a despatch from H. M.'s Consul General at Havana, calling attention to the number of casualties occurring to vessels conveying deck loads of timber and shooks between North American ports and the West Indies.

The Board of Trade desires me to suggest, for Lord Kimberley's consideration, whether, as it appeared that a considerable portion of the trade is carried on from the British Provinces, especially between St. John, N.B., and Cuba, it would not be desirable to bring the contents of this despatch under the notice of the authorities of the Dominion of Canada.

I have, &c.,

(Signed) T. GRAY.

The Under Secretary of State,
Colonial Office.

Mr. Consul General Dunlop to the Secretary Marine Department, Board of Trade.

Copy—M. 4748.

HAVANA, 3rd April, 1872.

SIR,—I think it my duty to call the attention of the Board of Trade to the number of casualties occurring from the practice of carrying decks loads of timber and shooks between North American ports and the West Indies.

A very considerable trade is now carried on from the British Provinces, especially between St. John, N.B., and Cuba; and scarcely a vessel arrives here without losing a portion of her cargo or experiencing damage on the voyage, owing to their carrying heavy deck loads of planks or of shooks.

I understand that most of their cargoes are insured in the United States, and that the premium charged on deck loads is high—say, from 10 to 15 per cent.; but from the almost constant losses which are reported it occurs to me that there is something wrong in the practice, and that many vessels are overloaded, and consequently not only run an extraordinary risk as regards both ships and cargo, but endangers the lives on board.

I am not aware whether such vessels, when laden and ready for sea, are inspected by Port Wardens or by the Underwriters' agents; but if such is not the case, it appears to me very necessary, and that there should be some stringent regulation on the subject of deck loads generally.

(Signed)

A. GRAHAM DUNLOP,

Consul General (Cuba.)

The Secretary Marine Department,
Board Trade, London.

The writer was present at the meeting in St. John above referred to, and complimented its delegates for the general ability they displayed as representatives of this Board. He expressed full approval of their suggestion in reference to "deck loads" of vessels coasting between ports in New Brunswick and ports in the United States, stating generally that the class of tonnage engaged in the carrying trade between ports in the Lower Provinces and ports in the United States north of Hatteras was particularly adapted for bearing the burthen of heavy deck loads, being fore-and-aft schooners specially constructed for such trade. They are mostly shallow vessels, with great breadth of beam, their dimensions averaging a depth or hold of from 7 to 8 feet, with a breadth of beam of from 27 to 30 feet, fore-and-aft rigged, and calculated to carry, in many cases, much over one-third of the whole cargo upon deck; and that while other class of vessels are occasionally employed in this coasting trade, that it would not, in his opinion, be expedient to make any regulations with reference to this particular trade, nor with that to ports in South America at present, the description of cargo taken to the latter country being, as a rule, long, dry lumber, of superior quality, which makes a buoyant cargo. The voyage, too, being much longer than to the West Indies, the deck loads, as a rule, are kept within the bounds of safety. As to the coasting trade, there are many harbours on the way, and vessels put in for refuge at the approach of a storm, thus escaping the dangers of deep-sea voyages.

From the foregoing and other circumstances, the writer argued that it was obvious the true policy should be to hold legislation upon these matters in abeyance until the same had been the subject of a joint and uniform arrangement between the United States and Canada. But with regard to the shook and lumber trade between ports in the Lower Provinces, especially the port of St. John, and the West Indies, he added, that in his opinion, derived from observation and experience in the matter, the official statement made by the Consul at Havana was in perfect accord with the facts.

On discussion, the Vice-Chairman admitted the correctness of the representations made by Consul General Dunlop. The St. John Board of Trade however, seemed averse to taking any decided action, being hampered, to a certain extent, by individual interests, which plead the competition of foreign tonnage as the ostensible reason of delay; but action is really deferred by members of the Board, who are shippers or shipowners, wishing to be free and unrestricted to secure deck freights as heretofore.

It is therefore absolutely necessary for the preservation of life and safety of property that the Government of Canada proceed in the matter, for the following reasons:—

1st. AS TO THE BUSINESS.—The trade between ports in the Lower Provinces of Canada and the West Indies is rapidly increasing—in fact, the shook and lumber supply of those islands is mainly procured from these provinces. The description of lumber manufactured in the United States being very valuable is almost entirely for other markets, as the quality required in the West Indies, although merchantable, is not No. 1; the boards being chiefly what is called shippers, and the poorer kinds of lumber stock are worked up into shooks. The material for the manufacture of such boards and shooks is more readily obtained in the Provinces, and the

cost of manufacture much cheaper, for shooks are frequently sold at St. John, N.B., to merchants in Portland and Boston for re-shipment from those ports. These Provinces have therefore enjoyed the monopoly of exporting lumber to the West Indies, so that the Minute of the Board, as follows, might very properly have been made more definite: "That the Board, having had before it the letter from the Deputy of the Minister of Marine and Fisheries, on the subject of deck loads, desires to thank that Department for communicating to the Board a matter of so much importance to the trade of this port. The Board admits that the evils complained of exist to a great extent, but as the port of St. John has to compete with ports in the United States, in the lumber trade, and would be placed under a disadvantage by having restrictions placed on its shippers, not applicable to those of rival ports, the Board feels that it cannot recommend a change unless similar action be taken in rival ports."

2nd. AS TO THE CLASS OF VESSELS.—The class of vessels employed in this trade are chiefly small barks, brigs, or brigantines and schooners, having a depth of hold of 10 feet and upwards, so as to stow three tiers of hogsheads of molasses on the return passage. These vessels are entirely different from coasters, being of deep and comparatively narrow model, with the requisite dimensions for carrying dead weight or under-deck cargoes.

AMONG THE ABUSES OF THE DECK LOAD SYSTEM ARE.—That owners or charterers now pile on deck loads without let or hindrance, thus increasing the risks run by vessel and crew. The cargoes are wet and icy, sugar box shooks or unseasoned lumber, and if such cargoes are piled above the rail, as is always done, more or less, they are more trying upon the vessel than even a full cargo of dead weight, for the heavy deck load destroys the trim of the vessel and interferes with her proper handling, the crew being deprived of the protection of bulwarks, &c.; then when stormy weather is experienced, the excessive weight on deck makes the vessel tender, opens her waterways, seams and stanchions, strains the topsides or throws the vessel on her beam ends, when she is apt to become waterlogged, as the water running along the bilge while the vessel is hove down cannot be reached by the pumps (there being no bilge pumps in this class of vessel); thus the overloading is the primary cause of many disasters.

The loss of property involved in this state of thing would be a sufficient warrant for restrictive legislation; but when the loss of life occasioned thereby is considered, it is confidently hoped that the Government will feel impelled to pass a measure which will in future effectually prevent the overloading of vessels trading to the West Indies, and which will protect our seamen from dangers imposed on them other than the unavoidable perils of the seas.

AS TO THE LOSS OF LIFE.—The following are a few of the cases of disasters, directly or indirectly caused by excessive deck cargoes, in which all or a portion of the crew lost their lives.

The brigantine "Bessie," of St. John, N.B., Tobin master, sailed from this port in February, 1868, for Cuba. The vessel was overladen to such an extent that she became waterlogged and unmanageable shortly after leaving port; she was rendered unseaworthy by having on board a greater number of shooks than she could possibly carry in stormy weather, and was compelled to put back; but being in such an unmanageable state she could not make the harbour in safety, but was driven at the mercy of the winds and waves and forced on the rocks at Courtney Bay. Capt. Tobin was washed overboard and drowned before the vessel stranded, and the others barely escaped with their lives. There was a great outcry raised at the time through the press, and a strong feeling in the community for preventive legislation. For a short season the deck loads were more moderate, but now the practice is just as dangerous as before, and until a government enactment is passed the like is liable to happen at any time during the shipping season.

The brigantine "John Lewis," sailed hence on 10th November, 1869, for Havana. She was boarded by a sea that washed off the deck load which, from its weight, had forced the deck open. The crew narrowly escaped.

The brigantine "Martha," of St. John, N.B., sailed hence for Cuba on 11th Jan. 1870, and drifted ashore derelict a few days later at Meteghan, N.S., with part of deck load gone and a signal of distress flying. She, too, had a most unreasonable deck load, and judging from the appearance of the vessel it was evident that it was the main cause of the disaster which followed, and that the crew had been washed off the deck load; they all perished.

The brigantine "Phœbe Ellen," cleared on the 5th Jan. of the following year for Havana, and meeting a heavy gale almost immediately after leaving port, sprung a leak, became unmanageable, being encumbered by a very heavy deck load which the crew tried to throw overboard and relieve the vessel; but it was frozen fast together, and could not be removed. The vessel was driven across the bay, going ashore near Digby, N.S. Captain Dill and two or three of the hands perished.

Such sad cases are recurring again and again, and call earnestly for immediate action. The preservation of life is of paramount importance; and the safe carriage of property is also a consideration. I would therefore suggest that a statute be enacted regulating the carriage of deck loads from ports and places in Canada to the West Indies, as follows:--

1st. That all single decked vessels be prohibited from loading or carrying deck cargoes above the main rail of the vessel.

2nd. That all vessels with spar decks be invariably restricted from carrying any cargo whatever on their spar deck.

3rd. That a thoroughly competent and reliable inspector be appointed at each port of clearance to survey vessels while loading, and see that the cargoes are properly stowed; that the Government regulations as to Deck Loads are faithfully observed and carried out, and that the vessels are in a seaworthy condition at their departure—his certificate to be produced on clearing the vessel at the Custom House.

[NOTE.—Many of the vessels engaged in the West India trade are provided with light spar decks, that is to say, from 10 to 12 feet depth of hold, and from four to five feet between decks. Such vessels should never attempt to carry cargo upon the spar deck, but they frequently do so, although it is simply carrying a deck load on top of a deck load, and it is not surprising that the most serious consequences ensue.]

Many years ago it was found that vessels sailing from ports in Great Britain were frequently overladen with iron, and foundered in consequence. On the matter being brought to the notice of the Government a regulation was at once made limiting the quantity of iron to one-third in excess of the vessels registered tonnage, and now iron is carried with comparative safety.

The same remarks apply to grain, which was formerly shipped from United States ports in bulk, to Europe, but many vessels were lost or damaged in crossing the Atlantic, by reason of the cargo shifting; and notwithstanding the United States were in competition with rival Baltic ports, the American authorities promptly acted in the matter, making the loading of grain subject to inspection, and now one-third of the cargo must be put in bags, and the vessel fitted with shifting boards, according to law.

The writer is not speaking from an insurance standpoint, for he has long since satisfied himself that risks of this character, viz.: endangered by heavy deck loads are unsafe, undesirable and unremunerative to underwriters; but he is induced to submit the result of his observations to the Government, in hopes that some such statute as above referred to will be made law, for the preservation of the lives of the seamen sailing from Canadian ports, and for the welfare of those depending upon them, as well as for the protection of all who engage in the West India Trade of the Dominion and are interested in its maritime prosperity.

I have the honour to be,

Yours respectfully,

ROBERT MARSHALL,

*Marine Insurance Agent and Attorney for New
Brunswick Lloyds Association of Marine Underwriters.*

From this it will be seen that Mr. Marshall after stating the position very fully, and arguing it very ably, asks that a statute very similar to that contained in the Bill before the Committee be enacted, regulating the trade between Canada and the West Indies, and further that an agent be appointed—"and Government regulations made"—to see the measure carried out at the Customs office before the clearance of vessels. Now, it will be observed that the Bill contains no provision for inspection. The opponents of the Bill, however, stated that they would rather go for a measure which provided for the appointment of inspectors, than for fixing a limit to the deck load. To this I answered then, as I answer now, that I considered in the interests of trade that it was better to place fixed limits to the deck loads, which would at the same time promote safety to life, than to have at each port an official as inspector, who if he chose to act in an arbitrary manner might harass and annoy the trade. Again, if these officers were appointed somebody would have to pay them, but if the Hon. gentleman asks for the gentleman asks for the appointment of a staff of officers, I can see no objection to inserting a clause to that effect in the Bill now in the hands of the Committee. Do not let us shut our eyes to the truth, but rather look the facts in the face, and if the abuses of the trade make the appointment of these officers necessary, the trade must stand the cost as well as the inconvenience that may result therefrom, and we must have them; but it is the abuse of the system that has brought about the necessity for legislation and for my own part, in the interests of the trade, I consider that the Bill under consideration is far more favourable than the principle of inspection, for which my hon. friend contends, but should he prefer assuming the responsibility of urging inspection for the trade, to meet abuses which he claims that this Bill will not cover, I have prepared a section which provides for inspection at such ports as the Government may proclaim, and which would include the Bay of Fundy ports. I now place it before the Committee, and am prepared to engraft it in the Bill to meet the trade views represented by my hon. friend should he assent to it; but in thus meeting his views I place upon him the responsibility of putting what I consider to be an additional restriction on the trade of his port.

[Here the hon. gentleman read the provisions of a clause providing for the appointment of an inspector or inspectors for such proclaimed port, whose duty it should be to examine during the season, the loading and equipment of such vessels as are engaged in the trade, and without his certificate the officer of Customs was prohibited from clearing the vessel.]

Mr. Burpee was here understood to say that he would not take the responsibility of accepting the principle of inspection, and as several other gentlemen expressed a strong feeling of opposition to it, but were at the same time advocating the measure as it stood, the Hon. Minister withdrew it, and stated that while he did not urge to have it engrafted in the Bill, he felt it to be his duty, when the gentlemen from St. John put forward such an alternative, to give them the option of accepting or rejecting it. He would not press its adoption, because he did not believe it was the most desirable course, nor did he believe it was one calculated to satisfy the trade, nor one that offered the best protection to life, though it may be that in the future, inspection may be necessary arising out of abuses in other than the lumber trade. The paragraph was then withdrawn.

The Hon. Minister then proceeded to observe that it has been further objected against the Bill that it is not comprehensive enough, and the Hon. gentleman to whom I have referred has stated that inasmuch as the subject having been brought under the notice of the Imperial Parliament by Mr. Plimsol, a royal commissioner having been appointed to examine into the abuses not only of the deck load, but of other questions relating to shipping, this measure should not now be passed, but should be permitted to stand over until we see the result arrived at by that commissioner, or that we ourselves should appoint a committee to act with that commission with a view to obtain information and consider the question.

The Hon. Minister stated in reply that the cases referred to in England and those of our own trade were entirely different. The question of deck loads formed a

very small branch of the list of grievances of which Mr. Plimsol complained, and which has been particularly under the consideration of the British House of Commons, and that in the appointment of the commission referred to, it is clear the question was far beyond that contained in this Bill. That no very serious complaints were made against ships owned in our country; that they are generally assumed to be of a good class, and according to the statements of my Hon. friend, the trade from Quebec and other ports of Old Canada is mainly carried on in a very different class of vessels from those sailing from his own port, and the same objection did not apply to the St. John trade. Looking at the mass of evidence I have submitted to this Committee, let me ask, is it necessary in order to arrive at a conclusion as to the propriety of restricting deck loads, that a commission should be issued? I do not think so, but if he desires to go further and place a supervision on all ships and cargoes, and wishes a commission to examine evidence for that purpose, the passage of this Bill will not prevent it, and in the meantime a crying evil will be remedied if the Bill passes. Let me say to my Hon. friend that I thought it due to him and to the important interests he represents, thus to refer to his views in relation to the commission, previous to the passing of his measure, in order that it might not operate against, or interfere with the inquiry which my Hon. friend professes an anxiety to obtain. But if his suggestion is carried and if this growing evil is permitted to continue for another year, delay may then perhaps be asked for by some one else on some other ground and with just as much reason.

Whether public opinion demands the total prohibition of deck loads as some members of the Committee have contended, or whether my Hon. friend in resisting the limitation represents public opinion in relation to deck loads, I think there can scarcely be a doubt that some measure is required. Let him look at the report of Boards of Trade and he will find that year after year they have asked for prohibition of all deck loads. Let him look at the resolution of his own Board of Trade and he will find the importance of the principle recognized so far as the transatlantic trade was concerned and he should not hesitate as to the inexpediency of further delay.

I would now, with the permission of the Committee, read two despatches, respectively dated 27th February and 27th March, 1873, from Earl Kimberley to His Excellency the Governor General, upon the same subject. The former of these covers a list of casualties and a return of timber-laden vessels reported to the Board of Trade up to the 7th January, 1873, as having been lost or damaged during the month of November, 1872.

[Here the Hon. Minister read the despatches and the list of casualties appended hereto.]

DOWNING STREET, 27th February, 1873.

MY LORD.—I have the honour to transmit you for communication to your Government, a copy of a letter from the Board of Trade with enclosures, relative to the casualties which have recently happened to vessels in the American timber trade, owning, as is alleged, to the carrying of deck loads during the winter months.

I shall be glad to learn the views of your Ministers, and to receive any suggestions which their knowledge of local circumstances may enable them to offer upon this important subject.

They will, I feel sure, gladly assist in giving effect to any practical measure which may be devised to lessen the number of casualties of this description.

You will be so good as to return to me Mr. Smith's Report, dated in December, 1860, which is forwarded to you in original.

I have, &c.,

(Signed), KIMBERLEY.

Governor General,

The Right Honourable, The Earl of DUFFERIN, K.P., K., C.B., &c., &c., &c.

Mr. Farrer to the Under Secretary of State, Colonial Office.

BOARD OF TRADE,
WHITEHALL GARDENS, 14th February, 1873.

DECK LOADS IN TIMBER SHIPS.

SIR,—The attention of the Board of Trade has been called to the dangers and losses which have arisen from the deck loads of timber ships in the American trade during the winter months.

The Secretary of State is probably aware that before the year 1862 there were enactments in force (16 and 17 Vic., Cap. 107, sections 170, 171 and 172) prohibiting the carriage of deck loads in timber ships clearing from the British North American Colonies to the United Kingdom, from the 1st of September to the 1st of May.

It was possible to some extent, at any rate, to enforce these enactments before the repeal of the Navigation Laws, because a British ship, with a British cargo, clearing from the Colonies for the United Kingdom, had an advantage over a Foreign ship, or over a Foreign ship, with a Foreign cargo, clearing from the United States, consequently the trade was confined to British ships engaged in the Colonial Trade, carrying Colonial cargoes, and cleared directly from the Colonies to the United Kingdom, and such ships could be stopped in the Colony if they evaded the law. But after the repeal of the Navigation Laws, there was nothing to prevent a Foreign ship, *i. e.*, an American ship, carrying on the timber trade between the Colonies and the United Kingdom, or to prevent a British ship from carrying United States timber to the United Kingdom, or clearing to the Colonies from a Foreign Port, and thence changing her destination to the United Kingdom. As a matter of fact, ships used, subsequently to the repeal of the Navigation Laws, to clear from the United States side of the river which separates New Brunswick from Maine, in order to evade the British Deck Loading Law.

Experience had also shown how difficult, if not impossible, it was to enforce the law by any proceedings on this side of the Atlantic.

Under these circumstances, the enactments above referred to were repealed by the Merchant Shipping Amendment Acts, 1862, 25 and 26 Vic., c. 63, s. 2.

It is obvious, under the above circumstances, that any effectual legislation on this subject must deal with ships at their port of departure in America, and that it must deal with ships clearing from the United States ports, as well as with ships clearing from ports in the British Colonies. It is also clear that the evils in question affect ships bound from those countries to countries other than the United Kingdom, and that to be complete, legislation ought to deal with all ships carrying timber across the Atlantic, whatever their destination. It is further clear that laws of this description cannot now be passed in this country, either for Canada or for the United States, and that they ought to be framed in concert, on a common basis by the Government of Canada and the United States.

Under these circumstances, I am to request you to move the Secretary of State to call the attention of the Government of Canada to this subject, and to suggest to that Government the expediency of enquiring whether any measures can be devised for preventing such frightful losses of life and property as have recently occurred.

I enclose a list made out from the returns of the Board of Trade of casualties which occurred during the last two months of last year (1872) in this trade.

I also enclose copy of a letter dated 11th December, 1860, from Mr. William Smith, then Controller of Customs and Navigation of the Port of St. John, now Deputy Minister of Marine and Fisheries for the Dominion of Canada, containing a complete statement conceding the operation of the law as it then stood.

A copy of this letter has been sent to the Foreign Office.

I have, &c.,

T. H. FARRER.

The Under Secretary of State,
Colonial Office.

RETURN of Timber-laden Vessels reported to the Board of Trade up to the 7th January, 1873, as having been lost or damaged during the months of November and December, 1872.

Name of Vessel.	Date of Casualty.	Port of Registry.	Tonnage.	Age.	Crew.	Cargo.	Port sailed from.	Port bound to.	Lives Lost.	Lives saved and by what means.
1872.										
Queen of the West.	Nov. 6.	Waterford.	1,432	29	24	Timber.	Quebec.	Belfast.	24	remained on board.
Maggie.	do 11.	South Shields.	846	30	16	do	do	Grimsby.	16	by Marie of Austria.
Chance.	do 3.	Liverpool.	972	18	21	do	Pensacola.	Sunderland.	18	by Holm Strand.
Darien (S.S.).	do 18.	do	864	9	35	Staves, cotton, &c.	Savannah, Ga.	Liverpool.	35	remained on board.
Margan.	do 8.	Greenock.	312	1	9	Timber.	Richibucto.	Bristol.	9	do
Polly.	do 14.	do	671	27	14	do	Quebec.	Beaumaris.	14	do
Express.	do 24.	North Shields.	711	18	15	Deals.	do	London.	15	by Nevada of Halifax.
White Crest.	do 24.	London.	1,061	10	19	Wood, 1,550 tons.	do	Shields.	19	remained on board.
Western Empire.	do 19.	do	1,245	20	22	Timber, 1,600 loads.	do	Bristol.	21	do
Dalkeith.	do 17.	Greenock.	848	14	18	do 1,056 loads.	do	Cardiff.	18	do
Morning Star.	do 12.	St. John, N.B.	285	10	8	Deals.	St. John, N.B.	Dundalk.	8	do
Jardine Brothers.	do 19.	Miramichi.	523	2	14	do and timber.	Dalhousie.	Liverpool.	4	do
Champion.	do 19.	Troon.	741	34	21	Timber.	Quebec.	Greenock.	21	do
Oriental.	do 28.	Cardiff.	654	26	16	do	do	Cardiff.	1	15 by Edith of New York.
War Spirit.	do 30.	St. John, N.B.	1,234	18	22	Deals.	St. John, N.B.	Liverpool.	1	22 by SS. Atlantic.
Ulah.	do 22.	Stockton.	311	31	7	Timber and deals.	Buctouche.	Swansea.	7	remained on board.
Passide.	do 5.	Glasgow.	572	40	17	do	Quebec.	Port Glasgow.	17	do
Mangerton.	do 21.	do	979	22	22	do	do	Greenock.	22	do
Manelon.	do 19.	Aberdeen.	737	16	17	do	do	do	17	do
Danbless.	Dec. 8.	Annapolis.	396	1	8	Wood	Dalhousie.	Bristol.	8	do
Radnagore.	Nov. 11.	Cardiff.	654	19	15	Deals, &c.	Quebec.	Highbridge.	7	by City of Elgin.
Urania.	do 23.	Plymouth.	1,198	18	24	Timber.	do	Bristol.	8	16 Marian of Liverpool.
Zetland.	do 26.	London.	1,131	9	27	Deals.	do	London.	27	remained on board.
David Cannon.	do 20.	Pictou.	577	9	10	Timber.	Miramichi.	Liverpool.	10	by Ponona.
Charles Ward.	do 10.	Newcastle.	805	18	20	do	Quebec.	Sunderland.	11	9 by SS. Batavia.
Saugen.	do 25.	Sunderland.	481	16	13	Wood	St. John, N.B.	Bristol.	13	remained on board.
City of Manchester.	do 29.	Quebec.	1,115	23	24	do	Quebec.	Greenock.	24	by Constance of Bristol.
Kafir Land.	do 20.	Aberdeen.	753	21	17	Timber.	do	do	17	remained on board.
Island Green.	do 29.	Newport, Mon.	376	6	9	do	Miramichi.	Liverpool.	9	remained on board.
Julia.	Dec. 1.	Liverpool.	973	21	20	do	Quebec.	do	20	by Kitty Gidden. [Tinto,
Pride of the Ocean.	Nov. 30.	South Shields.	1,372	16	25	Deals.	do	London.	12	10 by Don Guillermo.
Indian Queen.	do 29.	Liverpool.	962	20	22	Timber.	do	Liverpool.	1	10 remained on board.
Josephine.	do 21.	St. John, N.B.	470	9	11	Wood	Miramichi.	Glasgow.	18	do
Lady Havelock.	Dec. 9.	Liverpool.	855	14	18	Timber and deals.	Quebec.	Hull.	20	do
Lutus.	do 3.	Bristol.	824	32	30	Wood	do	Bristol.	20	do
Lady Seymour.	Nov. 19.	Liverpool.	936	30	18	Timber	do	Sunderland.	18	do
Lesbia.	Dec. 1.	Newcastle.	1,203	17	22	do and deals.	do	Grimsby.	22	by SS. Arthur.
Zarah.	do 9.	Glasgow.	365	26	11	Wood	Miramichi.	Gloucester.	11	remained on board.

Rosina	do	13.	Poole.	634	27	17	Timber.	Quebec.	Dartmouth	2	15 by the Thos. Lee.
Harda	Nov.	23.	St. John, N.B.	259	7	8	Shooks.	St. John.	Cardenas	4	8 remained on board
Lonsa	Dec.	10.	London.	903	12	17	Deals and timber.	Quebec	Liverpool	21	13 by Frde of Sweden.
Dakotah	Nov.	22.	Fleetwood	892	22	21	Timber.	do	Dunee.	1	21 by Express of Norway.
Cardross.	do	5.	Greenock.	568	18	16	Mahogany and cedar	Honduras.	Falmouth.	1	17 remained on board.
Osprey.	do	29.	Hull	745	27	17	Wood	Quebec.	Bristol	1	16 do
Sparkenhoe	do	29.	London.	1,253	7	24	Deals.	St. John, N.B.	Liverpool	24	do
Sir Charles Napier.	Dec.	8.	Truro	513	18	20	Wood	Quebec	Bristol	15	do
Assyria.	Nov.	18.	Newcastle	1,357	18	15	Timber	do	Plymouth	1	19 by SS. Baltic.
Huano.	do	19.	Aberdeen	843	22	18	do	do	Greenock.	2	18 remained on board.
Home	do	29.	Yarmouth	1,271	11	22	Timber and deals.	do	do	20	do
Victory	do	28.	Newcastle	752	16	16	do	do	Leith.	16	do
Frenchman	do	19.	Grangemouth.	1,115	15	23	do	do	Greenock	1	22 by SS. Darien.
Madge Wildfire.	do	7.	Liverpool.	845	18	17	Wood	do	South Shields.	1	16 remained on board.
Mont Blanc.	do	7.	Barrow	681	16	14	Timber.	Miramichi.	Barrow	14	14 by the Skjold.
Chieftain	do	17.	Lancaster	492	33	16	do and deals	do	Lancaster.	16	16 by SS. Tyne Queen.
Redan	do	24.	London	859	17	18	do and staves	Quebec.	London.	18	18 by the St. Louis.
Bessie Young	do	30.	Liverpool	322	16	10	do	Richibucto.	Whitehaven	10	10 remained on board.
Jamaica.	do	20.	Glasgow	421	18	11	Logwood, lignum vitæ.	Jamaica.	Liverpool	11	do
Landre.	do	29.	North Shields.	713	15	15	Deals.	Quebec.	London.	15	do
Arethusa	do	19.	Sligo	339	18	11	do	Matane.	Sligo.	11	do
Commodore.	do	18.	Aberdeen	562	11	17	Timber	Quebec.	Aberdeen	19	do
Lothair.	Dec.	2.	London.	624	21	15	Deals.	Miramichi.	Gloucester.	15	15 by the Annie Lorisay.
Illustrious	do	1.	Liverpool	1,172	19	21	Timber.	Quebec	Liverpool	21	21 by Carlingorm.
Alexandria.	Nov.	22.	Maryport.	382	32	12	do	do	Maryport.	1	11 remained on board.
Eastern Province	do	23.	Glasgow	377	14	10	Bark and molasses	Philadelphia.	Glasgow	10	do
Ailsa.	do	7.	Ayr	468	10	13	Deals.	St. John, N.B.	Ayr	13	do
Sarah Metcalfe	do	13.	South Shields.	441	24	11	Timber.	Quebec.	Groningen	11	11 by life-boat.
Stirlingshire	do	6.	Youghal	365	25	12	do	do	Highbidge.	12	12 by remaining on board.
Pera	do	23.	Norway	314	25	12	Deals.	St. John, N.B.	Penarth Roads	12	12 by ship's own boats.
Tinto.	Dec.	8.	Cardiff	754	23	16	Timber.	Quebec.	Cardiff.	*8	+19 by getting on the rocks.
Euphemia	do	13.	Maryport.	289	24	10	do	do	Kirkenbright.	10	10 by own boats.
Marian	do	8.	Liverpool	1,203	14	21	do	do	Cardiff	21	21 by remaining on board.
Margaret Ann	do	8.	Plymouth	718	21	17	do	do	Swansea	17	17 by steam tug.

* 4 of own crew and 4 belonging to wrecked vessel Pride of the Ocean of Shields. + 12 of own crew and 7 belonging to wrecked vessel Pride of the Ocean of Shields.

RETURN of Timber-laden Vessels reported to the Board of Trade—*Concluded.*

Name of Vessel.	Had she Deck Cargo.	Direction of Wind.	Force of Wind.	Nature of Casualty.	Opinion of Officer forwarding Return as to cause of Casualty.
Queen of the West..	No.	W.S.W.	12	Loss of spars and rudder, part cargo thrown overboard.	Stress of weather.
Meggie.....	Yes	S.E.	12	Abandoned.	do
Chance.....	do	W.	7	do	do
Darien (S.S.)..	No.	W.	10	Loss of boat, &c.	do
Margun.....	Yes	S. by W.	9	Loss of deck cargo, &c.	do
Polly.....	do	N.W.	71	do	do
Express.....	Yes	W.S.W.	7	Abandoned.	do
White Crest....	Yes	N.W. by N.	11	Loss of sails, deck load, &c.	do
Western Empire..	do	N.W.	12	do	do
Dulkeith.....	do	W	8	do rigging, part of cargo, &c.	do
Morning Star....	do	W.S.W.	10	do deck load, &c.	do
Jardine Brothers..	do	W.S.W.	10	Loss of deck load, &c.	do
Champion.....	do	W.S.W.	10	Decks swept.	do
Oriental.....	No.	W.N.W.	12	Abandoned, waterlogged	do
War Spirit.....	Yes	W.N.W.	12	do	do
Ulab.....	do	N.W.	12	Deck swept.	do
Esaside.....	do	N.W.	10	Leaky, loss of deck load, &c.	do
Mangerton.....	do	N.W.	11	Loss of sails	do
Manelon.....	No.	N.W.	12	Decks swept, sails carried away.	do
Dauntless.....	Yes	W. by N.	10	Loss of sails, deck load, &c.	do
Radnagore.....	do	W.N.W.	9	Abandoned, waterlogged.	do
Utina.....	W	W	9	do	do
Zetland.....	Yes	W.N.W.	9	Decks swept, and deck load thrown overboard.	do
David Cannon....	do	N.N.W.	6	Abandoned, waterlogged	do
Charles Ward....	do	W.N.W.	12	do on beam ends.	do
Saugreen.....	do	N.W.	8	Loss of sails, spars, deck load, &c.	do
City of Manchester.	do	N.W.	12	Abandoned, waterlogged.	do
Kafir Land.....	Yes	N.N.W.	10	Loss of sails, bulwarks, deck load, &c.	do
Island Green....	do	N.	10	do bulwarks and deck cargo.	do
Julia.....	do	W	10	Abandoned, waterlogged	Heavy deck load.
Pride of the Ocean.	do	W.N.W.	10	do	do
Indian Queen....	do	W.N.W.	10	do do the vessel turned over, but righted when [the masts carried away.	Stress of weather.
Josephine.....	do	N.W.	10	do	do
Lady Havelock..	do	W	8	Loss of rails and spars.	do
Lutus.....	No.	W.N.W.	12	Loss of sails, deck swept, &c.	do
Lady Seymour....	Yes	W.N.W.	9	Shifting of cargo, loss of bulwarks, &c.	do
Leshia.....	do	N. by W.	9	Loss of bulwarks, deck cargo thrown overboard.	do
Zarah.....	do	N.	11	Abandoned, waterlogged	do
Rosina.....	do	N.	10	Leaky, &c., deck cargo thrown overboard.	do
Harda.....	Yes	N.E.	2	Stranded at West Quoddy	Wind falling light.
Louisa.....	No.	W	12	Abandoned, waterlogged.	Stress of weather.

By this list above referred to and annexed hereto, it will be seen that out of 72 vessels lost and damaged, 29 of them were totally lost and 43 damaged; that there were 67 lives lost, that 48 of the vessels had deck loads, 11 of them were without deck loads, and 13, in which it was not known whether they had deck loads or not. The remarks of the forwarding officer refer to the nature and the cause of the casualty, and will speak for themselves.

I think this ought to convince hon. gentlemen that there is a great necessity for some kind of legislation, to put a stop to this crying evil.

The other despatch to which I referred, and which was addressed to the Governor General of Canada, is dated the 27th March, encloses Mr. Marshall's letter, which His Lordship had received, and Earl Kimberly goes on to state "that this matter, as your Lordship is aware, is one attracting considerable attention in this country and I trust it will receive the early consideration of your Ministers."

The gentleman opposing this measure complains that the limitation in the West India trade to $4\frac{1}{2}$ feet, will very seriously affect that trade. Let me, for his information, read this return of the shipments from St. John to the West Indies for the months of February and March last, and the hon. gentleman will perceive that all the deck loads, as well to the United States as to the West Indies, average only $5\frac{1}{2}$ feet.

The restrictions as to height of deck load would tell sorest on a class of woodboat schooners (as they are called), which are built to carry from 7 to 9 feet on deck, the largest part of their cargo. There are not, however, a great many of such:—

CUSTOM HOUSE,

ST. JOHN, N.B., 1st Feb., 1873.

SIR,—I have your note of the 21st ult., respecting the height of deck loads carried by vessels of 100, 200, 300 and 400 tons respectively to Cuba or the W. I. and coastwise, and for fall and winter. From the inquiries I have made, I find it impossible to classify them according to tonnage. The largest vessels do not carry the highest deck loads. I have noted a few as follows, viz.:

Schooner "Nelson," 148 tons, shooks, to Cuba, 6 feet 3 inches high.

Schooner "Robert Fulton," 114 tons, $3\frac{1}{2}$ feet to W. I., 8 feet coastwise.

Schooner "Iris," 114 tons, 7 feet boards to Portland.

Schooner "Florence," 158 tons, 6 feet, shooks, to Cuba, coastwise 8 feet high.

The larger vessels as a rule do not carry such high deck loads as the smaller ones. Then one master will take a higher deck load than another; one owner will force more on than another, or the cargo may be wet and heavy or light and dry. The extremes are from 3 feet to 9 feet, and I think the woodboat schooners carry the highest. If you wish me to follow the matter up any farther, I shall do so, and keep a record of outward vessels' deck loads. I find that I require to get my information in the most casual manner, as the masters of vessels in some instances fight shy.

Yours, &c.,

JAMES BARBER,
Customs Officer.

WM. SMITH, Esq.,
Deputy of Marine and Fisheries, Ottawa.

SHIPMENTS from St. John, N.B., during the month of March, 1873, with height of Deck Loads.

Rig.	Name.	Registered Tons.	Port of Registry.	Nature of Cargo.	Where Bound.	Feet.	Inches.
Schooner	Maud	398	New York	Shooks.	To Cuba, 7 tiers.	3	2
do	Don Pedro	67	St. John	Boards.	To Boston	6	
do	Monsita	254	do	do	To Cuba		
Brigantine	Micmac	256	do	do	To Montevideo.	4	2
Ship	Lightning	1637	do	Deals.	To Liverpool, only a few tiers		
Schooner	Volunteer	101	Windsor.	Boards.	To Boston.	6	
do	Ella Clifton	103	St. John	do	To Boston, about.	5	
do	Annie Martha	125	do	do	To New York.	5	
Barque	Lottie Stewart	742	do	Deals.	To Penarth Roads.	5	6
Ship	Calcutta	1372	Glasgow.	do	To Liverpool.	3	
Schooner	Charles A. Bovey	172	St. John	Boards, &c.	To Cuba.		
Brigantine	Josie A. Devereaux.	391	Boston.	Shooks.	To Cuba.	1	6
Schooner	Earnest	79	St. John	Lumber	To Boston	7	
do	Mocking Bird.	121	do	Laths	To Vineyard Haven.	7	
do	William Wilson.	266	United States.	Shooks.	To Cuba	6	6
do	Gipsev	72	St. John	Boards.	To Boston	4	
do	Howard Holder.	93	do	Shooks.	To Portland.	6	
Brigantine	Fidelia	331	Bangor.	do	To Cuba <i>No deck load.</i>		
Schooner	Annie W	81	St. John.	do	To Portland.	6	6
do	J. B. Harris	81	do	Boards.	To Boston.	6	
do	Gold Hunter	104	do	do	To Boston.	7	
Barque	Lallah Roukh.	495	do	do	To Montevideo		
Schooner	E. G. Sawyer	149	United States.	Shooks.	To Cuba.	5	
do	Active.	264	do	do	To Cuba	3	
do	Ada	164	St. John	Boards.	To Cuba	5	
do	Snow Bird.	99	do	do	To United States.	7	
do	Ida	93	do	Laths	To United States.	6	3
do	M. R. W.	127	do	Boards.	To United States.	6	6
do	Eliza B. Beard	101	do	Laths	To Boston.	5	
do	Arcilla	94	do	do	To Boston.	9	6
do	Five Sisters.	146	United States.	Shooks.	To Cuba, 15 tiers.	7	
do	America.	86	Windsor	Boards.	To Boston		6
do	Impudence	115	St. John	do	To Boston.	5	
do	J. W. Scott.	109	do	do	To Cuba.	4	6
do	Tempo	143	do	do	To Cuba.	7	
do	Militia	70	Parrsboro'	do	To Boston.	5	
do	Marcia Reynolds	293	United States.	Shooks.	To Cuba.	3	6
do	L. and M. Knowles.	177	do	do	To Cuba.	7	
do	Adelia.	114	St. John	Boards.	To Newport	6	6
							5½

JAMES BARBER,

Customs, St. John, N.B., 29th March, 1873.

I send you as above a further list of vessels with the height of deck load taken by each. Of course I get my information solely through the masters with one exception. I think they are correct.

Eight Shooks in height will give 3 feet, a shook is about 5½ ins.; 8 tiers would therefore, be a little over 3 feet.

The average height of the above is a shade over 5 feet.

I have not made any inquiries amongst the ship-owners as yet, but will do so quietly very soon. [The masters of vessels as a rule will be very thankful for such a law as you propose. One master told me, if his owners would not force him to take more than 6 feet, he would be perfectly satisfied.]

I imagine from conversations I hear over the counter, that both the masters and clerks are under the impression that some restriction is about to be put upon the reckless system of piling on deck loads.

[In making out the wreck returns, I have been satisfied all along that heavy deck loads have been one of the great causes of loss and disaster.]

I will continue making notes of the height of deck loads.

JAS. BARBER.

WM. SMITH, Esq.,

Deputy of the Minister of Marine.

It will thus be seen from the facts which have been adduced that not only is there an existing evil, but that public opinion demands its removal. Her Majesty's Government are fully alive to that fact as evidenced by the despatches which I have read; my colleagues and myself in the Government of Canada feel that prompt measures are imperatively demanded, and I have no doubt but that this Committee will recommend that Parliament sanction the passage of the Bill which I have introduced. Let me say to those who have opposed it, that they are not acting wisely if they have done so in the interest of the trade, as I am satisfied that the great danger to be feared from their standpoint is the extreme in restriction and inspection to which the present agitation in England will be carried in their desire to remedy the insecurity to life which the present system has developed. The probability is that there will be a rush from one extreme to the other, and this will only be intensified by opposition to it, as has been given to this measure. Our trade and the shipping interest upon which our trade largely depends, is of too great importance to our prosperity as a people to have it imperilled, and ranking as we do as a maritime people fourth amongst the nations of the world, it is our duty and interest alike to see that no restriction of an unnecessary or burthensome character should be placed upon our Tonnage that is not absolutely demanded in order to give additional security to life, and to protect a class of people who are from circumstances helpless to protect themselves. From this standpoint our Government have acted, and I feel assured that the sense of this Committee will sustain the views which I have presented.

Mr. Burpee (St. John, N.B.) said the Bill was a very important one, so far as the interests of the Maritime Provinces were concerned, and it was one which would especially affect the trade of New Brunswick. The result of the discussion of the subject of deck loads in the English Parliament had been the appointment of a commission to investigate the whole matter with a view to future legislation. If the Canadian Parliament passed a deck load Bill such as that proposed, it would restrict the trade of the country, and allow foreigners to come in and take the trade from our own doors. A Bill of this character should be reciprocal, and should apply to other countries as well as to Canada. He thought that if he had obtained statistics he would have been able to explain many of the facts brought forward in opposition to deck loads, and to have shown that many of the losses referred to were not owing to that cause. He contended that whilst vessels engaged in the Quebec timber trade were old worn-out vessels, the vessels sailing from New Brunswick were mostly new first class ships, and more safe with a deck-load than others without one. Respecting loss of life, he was in a position to say that, within the last five years, in which period one thousand vessels had sailed from St. John, not more than ten lives were lost in those vessels owing to deck loads. He moved an amendment to the effect that it was undesirable to pass Mr. Mitchell's Bill, and that a commission be appointed to enquire into the whole subject with a view to future legislation for better protection of life and property.

Mr. Young (Montreal) thought the statistics adduced by the Minister of Marine and Fisheries ought to be sufficient to satisfy every one that a change was absolutely necessary. Out of forty-nine vessels sailing last fall from the Gulf of St. Lawrence, there was evidence that thirty-six of them were lost at sea, involving a loss of four millions of dollars. Who paid for that loss? It was not the underwriters, who knew the risks and derived a profit out of their business. It was not the shipowners, because they insured their vessels. It was the farmer, and everyone who exported a dollar's

worth of produce, because the effect of those disasters was to add to the insurance of every article exported from the country. There was not a farmer or lumberman in Canada who did not pay towards that four millions of dollars. Sailors were obliged to go to sea, but every intelligent man would say that deck loaded ships were not proper to go to sea in. The statistics of the West India trade showed that the same cause which led to great losses in the Atlantic trade was in full operation in the West India trade also. All statistics pointed to deck loads as the cause of great losses at sea, and his only objection to the Bill of Mr. Mitchell was that it did not go far enough, and prevent deck loads altogether. He did not think Parliament should stand by and see this great annual loss of life and property without seeking to apply a remedy. With respect to the argument about waiting for similar legislation to take place in the United States, he submitted that in this new country we should do what is right, no matter what other countries do.

Mr. Doull (Pictou) thought that Parliament should defer taking action in this matter of deck loads at the present time. The Bill only provided against overloading vessel with deck loads, but there was just as much necessity for legislation against overloading vessels with deck-weight cargoes under deck. The whole question should be considered by a commission before Parliament legislated.

With reference to deck loads.

Mr. Young (Montreal) pointed out that an Act had been passed in regard to port wardens seeing to the proper loading of vessels.

Mr. Mackenzie asked for information as to what the commission would have to do, for if the statistics were reliable they could now form an opinion on the question. He thought that nothing but delay could be gained by appointing a commission.

Mr. Burpee thought much more information could be had from shipowners beyond what the Committee at present possessed. The principal reason for appointing a commission was because a similar commission had been asked for in the United States and granted in Great Britain. It should also be remembered that whereas the law would only affect Quebec and Montreal for a month or five weeks, it would affect New Brunswick ports during the whole period to which restriction in carrying deck loads applied.

Mr. Mackenzie said the commission appointed by the English Parliament was to inquire with regard to the construction rather than the loading of vessels.

Mr. Mitchell replied and submitted an additional clause for the proposed Bill, for the appointing of inspectors, by the Governor in Council, for loading of ships, which clause he was prepared to incorporate in the Bill, if desired.

Mr. Holton complimented the Minister of Marine and Fisheries for the manner in which he had submitted the matter to the Committee, remarking that Mr. Mitchell deserved well of the trade of the whole Dominion by reason of the great attention he had given to this very important subject. The information he had given to the Committee was of the most ample description, and he hoped the Committee would not render futile the efforts which had thus far been made in bringing about a better state of things in regard to what they all felt, with the evidence submitted to them, was a crying evil calling for redress at the hands of Parliament.

The amendment moved by Mr. Burpee was then put and lost.

The preamble was then adopted, and further consideration of the Bill was postponed until the next meeting of the Committee.

On the suggestion of Mr. Young (Montreal) it was agreed to print the statistics submitted by the Minister of Marine.

At the next sitting of the Committee the Bill was unanimously recommended to Parliament for adoption, and the report and evidence of Mr. Mitchell was ordered to be printed with it.

APPENDIX No. 21.

MESSENGER PIGEONS.

DEPARTMENT OF MARINE,
HALIFAX, 16th January, 1891.

SIR,—On the suggestion of Major-General Cameron, the question of communicating intelligence by means of trained homing pigeons was considered by the Department early in the season of 1890, and it was decided to establish, at the marine wharf in Halifax, a loft as an experiment, with special reference to communication between Halifax and Sable Island.

A loft was prepared in the south store at the marine wharf, according to the detailed specifications forwarded by General Cameron. It is divided into two compartments, one for the free birds and the other for those to be kept in confinement.

The dimensions are as follows:—Extreme length 17 feet; width, 21 feet; height floor to ceiling, 6 feet 11 inches; slope of roof, 5 feet 10 inches, from floor to bottom of slope, 4 feet. The loft is divided lengthwise by a wire netting partition fitted with door. Rows of nests run along the sides under the eaves. There are $5\frac{1}{2}$ divisions on each side, 3 feet long and 1 foot high, three nests in each division. Each compartment has a window in the east end, guarded with wire netting and fitted with trap-doors leading to the perches and airing cage outside. The free compartment has also a sash in the roof.

The following birds were sent from Liverpool, Eng., on 13th June, 1890. I may mention, referring to the following list, that squeaker means a bird of about three weeks old:

No. 1. Red Chequer, squeaker, Mr. Cottless No. 11, from dam of No. 5 below, which flew from Chard (138 miles) in London Flying Club, 1889, Young Bird Races, and a splendid mealy cock lost at Marston (95 miles) last week.

No. 2. Blue chequer, blue, a pair of squeakers, Mr. Cottless No. 13, from an Offerman's cock, by an Offerman cock and a dam of Olliver's Newcastle cock, and hen of Bordeaux strain by an excellent hen of Offerman's.

No. 3. Blue, Blue Chequer, a pair of squeakers, from Nos. 25 and 39 in the catalogue of Offerman's Antwerp sale at Manchester. Young ones from the same parents flew in the young birds races in 1889, from Chard (138 miles), and are now going to the old bird races from there.

No. 5. Red Chequer, smutty mealy, a pair of squeakers, from a mealy Smerle cock which has flown twice from Cherbourg, Granvilles, Rennes, Dol, La Rochelle, and won several prizes, including 3rd from Dol. Four of his brothers flew from Napoleon Vendu, and a hen (Red Chequer) winner of first prize from Napoleon Vendu, a half sister to "Bordeaux Cock."

No. 7. Blue, squeaker, from the father of mealy Smerle, mated against No. 5 above and small hen of unknown pedigree.

All the above birds were bred by W. H. Cottle, Esq., Yeolmbridge, Woodvale, S. E., London.

Mr. Cottle's loft took 1st prize from Bordeaux, 500 miles with "Nabob,"—also 1st from Granville, Rennes, Nantes, 300 miles, and Napoleon Vendu. All these against a large number of competitors and over long distance.

Nos. 11 and 12. Blue chequer, squeakers. Bred by E. Priest, of Newport, from a very good pair of workers.

Nos. 13, 14, 15 and 16. Blue. Young birds. Maindu Club, Nos. 232, 228, 175 and 177. Bred by White of Maindu. All marked for racing but sold on account of owner having gone to sea. They have been out a few times, so must be carefully trained. Very good working strain. No. 177 has a crooked breast.

No. 17. Blue chequer, squeaker. Bred at Newport by Major Allat.

No. 28. White on head, squeaker. Bred by Major Allat.

Nos. 18, 19 and 20, blue chequer, red chequer and red chequer, squeakers. Bred by Mr. Seys, The Craig, Newport.

No. 21. Blue chequer, squeaker, selected for points from a dealer. Pedigree unknown.

The birds in this list are in their order of value by reputation.

Of these birds, one died at Quebec, one on the way here and two shortly after arrival, leaving sixteen birds which were placed in the loft on the 18th July. On the 29th their numbers were augmented by six young birds of the best Belgian breed, kindly sent by Count de Bury from St. John, N.B.

As none of the employées of the Department here had any special knowledge of the care and training of homing pigeons the services of Mr. Downs, the well known and experienced naturalist, were secured on 16th August.

All the details of the care of the pigeons, the cleaning of the loft and the feeding, &c., are looked after by Mr. Neal, our storekeeper, under the directions of Mr. Downs, who superintends the arrangements and especially everything connected with the breeding of the birds and their training. Mr. Down receives \$100 per annum for his services and the following is his report to 12th January, 1891.

200, AGRICOLA STREET.

HALIFAX, N.S., 12th January, 1891

DEAR SIR,—Acting under instructions from you, I, in August last, took general charge of the carrier pigeon station at Halifax. I found the loft intended for the birds to be in all respects satisfactory, the instructions of Major-General Cameron having been faithfully followed.

On taking charge I found twenty-four birds all adults, of which four died shortly after arrival. It was intended that there should be some experimental flying with some of the birds which had not been previously flown, but the markings, on all birds were so indistinct I could not tell the tried from the untried ones. I therefore kept all in the loft, believing it would be better to raise and train young ones.

There are now ten young birds, and I intend the present week to give them their first experience on the wing, and after they are familiarized with their surroundings, take them some distance from the city, increasing the distance gradually, until such times as I feel myself justified in recommending that they be taken to Sable Island or elsewhere when required for practical purposes.

From my many years' experience with bird life, I have no reason to fear that the experiments proposed by the Dominion Government will be other than successful, and the result be the saving of valuable time in making communication between the mainland and the much-dreaded Island.

I make from two to three visits to the station each week, and make necessary examinations and enquiries as to the food of the birds, their condition as to cleanliness, &c., and I have much pleasure in bearing testimony to the fact that Mr. Neal and his assistant give all due attention to their duties.

Nothing appears to be wanting, and there can be no doubt that the service will be satisfactory and successful.

I have the honour to be,

Your obedient servant,

H. W. JOHNSTON, Esq.,
Marine and Fisheries Department.

ANDREW DOWNS.

Naturalist.

The Deputy Minister of Marine,
Ottawa.

H. W. JOHNSTON,
Agent Marine Department.

MESSENGER PIGEONS: A NATIONAL QUESTION.

Until fifty-three years ago there was no more rapid means of conveying intelligence than was supplied by pigeons. It is only within the last half century that electricity and steam have come into competition with the messenger pigeon; and even in the present day there are innumerable conditions under which the bird is *facile princeps*.

Prior to the development of railways and telegraphs, travelling was so slow and transportation had so many difficulties with which to contend that the training of pigeons could only be carried out by a very few individuals for short distances; and the places at which they were employed were so remote from one another as, with few exceptions, to preclude arrangement for their reciprocal connection by pigeon post.

What is known of the employment of messenger pigeons prior to the early years of the present century may be related in the words of a Reviewer in the *Royal Engineer Journal* of June, 1885.

"The employment of carrier pigeons for transmitting intelligence was known to the ancients; early navigators, when they neared their native shores, used pigeons to advise their friends of their coming home. In Greece the carrier pigeon was the messenger employed during the Olympian games. When Greece became a Roman Province, carrier pigeons served to convey to the Romans news of the gladiatorial fights and of races. In Egypt, of old, the carrier pigeon post was a public institution. The African traveller, De Volney, writes on this subject: 'The state columbaries were distributed all over the country in towers specially built, and it was owing to constant communication between the several stations that public order and safety could be preserved in the extensive Syro-Egyptian Empire.'

"John Moore asserts that these oriental carrier pigeons were brought by Dutch mariners to Europe. They were called *Bagadettes* after Bagdad, and it is probable that the Belgian carrier of the present day is a descendant of the oriental bird. It is quite surprising into what a variety of services the carrier pigeon has since then been pressed. Instances of its successful employment in the interests of speculation, politics, the saving of life, public safety and war are numerous.

"In 1770 an Italian is said to have had recourse to having the winning numbers in lotteries sent him by carrier pigeons. It is a well known fact in this country (England) that the London house of Rothschild used carrier pigeons in 1815 to obtain information of the course of events on the continent, and thus was able to receive the news of the defeat of Napoleon at Waterloo three days before the English Government did, and to buy up largely English Government stock at its then depressed price, and sell at an enormous profit after the rise which took place when the news became generally known, thereby realising an immense fortune. * * It appears from the writings of Pliny that the Roman armies in all probability made use of carrier pigeons, otherwise the great rapidity cannot be explained with which Julius Caesar received information of risings in Gallia, enabling him to descend the Alps with his legions at the least sign of disturbances. It is also stated that during the siege of Candia by the Venetian admiral Dandolo, at the beginning of the 13th century, the latter received important intelligence from the island (Crete) by carrier pigeons, which facilitated its conquest. The siege of Harlem by Frederick Toledo (1572), the siege of Leyden by the Spaniards (1675), the bombardment of Antwerp (1832), supply also examples of the successful employment of the carrier pigeon post."

The foregoing sketch of pigeon service carries its history down to times when railways and telegraphs originated and began spreading into the wonderful net work they now present on maps of the civilized world. For a time the employment of pigeons appeared to be doomed to extinction. Love of sport, however, came to the rescue, and with the assistance of railway and telegraph the systematic rearing and training of birds were carried on to an extent that had hitherto not been dreamt of, until in 1870, at the siege of Paris, a most powerful impetus was imparted to the

movement, and to-day the area of the civilized world over which organized pigeon post is established, the vast flocks of birds employed, and the vital importance of the reliance placed upon them, are nothing short of marvellous.

But in Canada where is the organization? Where are the birds? How many of its people have even heard of them?

It is the aim of this article to awaken interest in its subject, to make known what the power of the messenger pigeon is, to show what services the bird may render, and to demonstrate that to encourage, to support and to actively co-operate in developing pigeon posts throughout the Dominion are, for Government and people, national duties.

Amongst the names of the numerous varieties of pigeons, the *Carrier* is perhaps most familiar to the public ear. This name is popularly misapplied to birds used to convey messages. The *Carrier*, however, is not suited to this purpose. It is essentially a fancier's show-bird—tall, erect and bold in carriage. It is specially marked by what the uninitiated might regard as warty excrescences around the eyes and above and below the beak. An excessive and regular development of these apparently abnormal growths or *wattles* is considered by the professional fancier as an important criterion of excellence. If of perfect form and full size the wattles interfere with the birds vision in the direction of its beak. The *homing faculty*, or power to satisfy a desire to trace its way homewards, is not possessed in any high degree by *Carrier* pigeons.

Birds used in messenger service are common-looking pigeons, undistinguishable by untrained sight from the ordinary house pigeon bred for the table. They cannot claim, as *Carriers* may, to be a distinct species. In olden times—pigeons being used for comparatively short distances—many varieties were available: but, as time has passed, the principle of the survival of the fittest has been in constant operation; and now there are classes of birds in which the homing faculty, with great powers of wing and endurance, are highly developed.

Such pigeons are known in German as *brieftauben*—letter pigeons; in French as *voyageurs*—travellers; and in English variously as travellers, couriers, homing and messenger pigeons.

"Homing pigeon" may be the name in most general use. It refers to the faculty which, when highly developed, renders the bird useful.

"Messenger pigeon" would appear to be the most appropriate name, as it implies the service to which the bird is put. The facility this bird has in directing its flight homewards has been variously accounted for. Some ascribe it to an exercise of highly developed intelligence, others to perfection of sight, and yet others to instinct or intuition. In keeping with these opinions we find that in selecting birds some people consider that the form of the head is of special importance—breadth between the eyes, and development backward from the eyes indicating large brain. Others pay more attention to the eye itself—looking to its brightness and prominence as evidence of power of vision; and even the colour of the eye is noted by some. Again, others deem pedigree to be the only reliable guide in selection.

It might be supposed that all would agree with regard to strength being indicated by size. Yet, there are those who prefer gracefully outlined slight birds—while many prefer robust and sturdy-looking pigeons. Long tails and short tails have their admirers.

With regard to the wings, there is a near approach to unanimity. Length of wing, breadth and firmness of pinion webs, and perhaps the straight alignment of the wing feathertips, when the wing is fully expanded, are generally accepted as desirable conditions.

There is perfect agreement in the view that trial in flight affords the only conclusive test, and that birds which do not pass through the ordeal satisfactorily should be removed from the loft, since their inferiority may be repeated in their progeny.

With a view to ascertaining whether sight enabled the messenger pigeon to trace its way homewards, birds have been blinded before being thrown for flight, and

they failed to find their way. On the other hand, they have been able to steer a correct course through the darkness of night—and there are innumerable instances of their passing directly homewards over hundreds of miles by lines they had never previously explored. It is difficult to conceive that any development of what the five senses are understood to be could enable a bird to accomplish what the *homer* does.

From Berlin to Paris is, roughly, 500 miles. It is authentically recorded that a French bird captured near Paris was conveyed to Berlin, kept there for four years, and then, on escaping, returned to its loft in Paris. The writer of this article purchased two birds at Toronto, eastward of which place they had never been flown. From Toronto they were conveyed to Kingston, 150 miles eastward, and there kept prisoners in a breeding cage. Through an oversight they were subsequently sent northward forty-seven miles to be flown from Sharbot Lake. Instead of returning to Kingston they went westward 150 miles direct to their old loft at Toronto. These birds had been sent from Toronto to Kingston, and thence to Sharbot Lake, in a closed basket, and they had not previously seen the intervening country. Neither sight nor a combination of all five senses could have helped to guide them. There are cases without number of birds being sent in training 100, 200 and 250 miles beyond a point to which they had previously been.

Whatever the homing faculty may be, it is one which is present at a very early age and rapidly develops. It is potentially present at the bird's hatching, and needs only opportunity for development into activity. Very young birds may be removed from the loft in which they have been hatched, domiciled in a new home, and there liberated, without much risk of their deserting. Older birds cannot be so treated.

The rapid development of the homing faculty is illustrated in the following experience: "The Scamp," when a squeaker three weeks old, was removed from the loft where it had been hatched in Utica, New York, to a loft in Northampton, Massachusetts. Thence it was being trained in a south-westerly direction until White Plains, New York (105 miles) was reached. From this station, instead of returning to Northampton, it made its way direct to its native loft in Utica, 153 miles north-west of White Plains. From Utica it was returned by express to Northampton, and there kept a prisoner until apparently re-domiciled. Presently, however, accompanied by a mate, it deserted, and at noon of the same day the pair was found to have turned out the occupants of the nesting place in which the "Scamp" had been hatched at Utica, and to have taken possession of his old residence.

Again, in 1882, Major-General Hazen, of the United States Signal Service, and Major-General Breckinridge, of the Department of the Pacific, had their attention directed to the use of messenger pigeons for communicating between signal stations and in Indian warfare. The War Department enquiries resulted in an adverse report by Lieut. Berkheimer, based upon information, not upon experience. Mr. E. H. Conover, of Keyport, New Jersey, thereupon undertook to prove that birds could be used for distances of 150 miles "before October of the year in which they were hatched," and needed no gradual training. He tested the case with nine young birds, with one exception under five months of age on the 15th August, when the experiment began, and none of them had previously been more than sixty miles from home.

The successive flights were: 100 miles from Elkton, Maryland, 15th August; 117 miles from Havre de Grace, 19th August; 183 miles from Washington, 26th August; 338 miles from Lynchburg, Virginia, 1st September.

The start from Washington was arranged under the superintendence of the United States chief signal officer. The return of the birds from this trip to Keyport was announced at New York by message bird, and the result telegraphed to Washington by noon, and received at Keyport by bird at 12.45 p.m. In the flight from Lynchburg (338 miles) the start took place at 6.10 a.m. The first bird home arrived at 6.01 p.m., having flown at a rate not less than a mile in 2 minutes 7.6 seconds. None of the birds were lost in these journeys.

In Belgian training, after attaining fifty miles, birds are commonly sent to greater distances by successive stages of 50, 100 and 200 miles and even more at a time. Amongst the regular long single day courses may be mentioned:—

	Miles.
Liège from Toulouse	505
Ghent from Morceaux	545
Malines (Mechlin) from Tarbes	554
Ghent from Bayonne	560
Liège from Lourdes	565

The distance between San Sebastian, in Spain, and Liège, in Belgium, 615 miles, was traversed by a bird, in 1862, in one day. This is probably the greatest distance which has been passed over in a single flight. Fifteen other birds thrown at the same time arrived at their loft early the following morning.

As instances of long rapid flights, may be mentioned that in 1885 a bird liberated at Abington, in Virginia, flew 508 miles to Brooklyn, at the rate of a mile in 1 minute 42·1 seconds; and 351½ miles between Châtellerault and Verviers were passed at the rate of 1 mile in 1 minute 12·87 seconds.

The following are instances of rapid short flights:—

One mile in 60 seconds, 180 miles, Paris to Moulins.	
“ 59.6 “ 177 “ 1,665 yds., Dijon to Blois.	
“ 58.8 “ 101½ “ Albert to Shaerbeck.	
“ 58.5 “ 243 “ Cresson, Penn., to New York.	
“ 57 “ 63 “ Quievrain to Antwerp.	
“ 56 “ 54½ “ St. Quentin to Boussu.	
“ 55 “ 70½ “ Noyon to Flenu.	
“ 50.4 “ 215 “ Etampes to Louvain.	
“ 48 “ 80 “ Arras to Antwerp.	

Amongst these instances two are exceptionally noteworthy: In 1879, in the United States, the 243 miles between Cresson, Pennsylvania, and New York, were passed over at the rate of 1,805 yards in a minute.

From Etampes to Louvain, 215 miles, were flown at the rate of 2,095 yards in a minute.

A fair idea of the performance of a good bird may be gathered from the result of a race from Orleans to St. Nicholas, 243 miles, on 6th June, 1875. Out of 1,445 birds thrown the 214 which accomplished the distance in the shortest time travelled at rates varying between 1,469·7 and 1,362 yards in a minute—the slowest of these being 23 minutes later than the swiftest in completing the flight.

When distances greater than can be flown in a continuous period of daylight are attempted, the rate of flying is not ascertainable, and the time occupied varies extremely. For the present, Canada is not interested in these longer flights; but it may be noted that the 1,600 miles between Aix-la-Chapelle and Rome was passed in 10 days and 7½ hours. A case of 1,500 miles having been passed over in three days is somewhere mentioned.

A noted bird, Arnoux, that belonged to Mr. A. P. Baldwin, of Newark, U.S., in the course of four months, in 1885, flew as follows, successively:—

	Miles.
Trained up to	150
Raced	130
do	196
do	272
do	372
do	535
do	515
do	1,010
Total.....	3,180 Miles.

Later it was sent to Boutte, Louisiana, 1,154 miles; but news of its return had not been received by the publisher of the paper from which these details have been taken.*

It is observable that for its last finished race the bird had been sent out 475 miles beyond a point to which it had previously been sent.

Hitherto mention has been made of flights over land only; but the bird's faculty enables it to find its way home across the sea for distances but little short of those which it can accomplish over land in a single continuous flight.

There is reliable evidence of their conveying news from 320 miles outside Sandy Hook. The United States Signal Department place the sea limit at about 500 miles. Dr. Johnson, of Keyport, one of the leading authorities on the subject in the United States, is of opinion that 450 miles may be regarded as the limit of reliance on the bird's power from seaward.

Birds of the Plainfield Club have been successfully flown from 100 miles at sea—300 miles to their loft.

The regulations of the United States Government loft at Key West Island—established for naval and military purposes—intimate that their birds have to be trained to 100 miles in their first year, an additional distance in the second year, and to 400 miles in the third and subsequent years.

In the regulations just mentioned it is noted that "successful flights have been made during storms of wind and rain, and even during the night," but, a warning is added that only tested and thoroughly reliable birds should be placed under these disadvantages.

Count de Bury, of St. Johns, New Brunswick, has flown his birds successfully through twelve miles of dense fog, and in snow storms.

On the 30th of July, 1883, 650 pigeons sent from Verviers, Belgium, to Calvi, Corsica, 560 miles, were there liberated. They passed in a direct line homeward over Monaco, where they were seen after crossing $93\frac{1}{4}$ miles of sea from Corsica. These birds, had they made for the nearest mainland to avoid the sea would have followed a N.-E. course, instead of one to the west of north which, they followed.

Mr. R. Stevens, of the Plainfield Club, New Jersey, flew birds from Manassas, Virginia, about 231 miles, which returned to his loft in heavy rain and fog, having moved at a rate not less than 695 yards in a minute.

Between the Island of Maddalena—north coast of Sardinia and Rome—149 miles, all sea—communication has been kept up by pigeons in all weathers.

Naples and Cagliari, Sardinia—279 $\frac{1}{2}$ miles across sea, are immediately connected by pigeons.

From what has been remarked, the power of the messenger pigeon to endure the fatigue of long flights, and to select its direction homewards, will readily be admitted. It is a matter of general knowledge that these birds are prolific. A pair may be counted upon to rear three pairs of young ones in the course of a year. As many as nine pairs of young ones have been reared by a single pair of birds in twelve months. The birds are hardy, and need no exceptional treatment, apart from training. Training is nothing more than giving them practice in the exercise of their homing faculty.

One gramme, equal to 15.432 grains or .032 oz. avoirdupois, is the weight which the French—during the siege of Paris by the Germans—considered might be carried by pigeons without affecting their flight. Two and one-quarter inches in length of large turkey quill weighs about $\frac{1}{2}$ gramme. Foreign post note paper, 14 sheets to 1 oz., gives about 43 square inches of writing surface to the $\frac{1}{2}$ gramme. A strip of such paper 10 inches long by about $2\frac{1}{10}$ inches broad, rolled up and inserted in the quill, would form what was held to be a pigeon load.

With this low limit of carrying power the resourceful ingenuity of the French enabled them to send over one million words by a single bird at one time; and, not

* In October, 1890, it was announced that the bird Arnoux had returned to Mr. Baldwin's loft.

only this, but to despatch the news received to the persons for whom it was intended in a readable form, in a time beyond comparison shorter than that in which the work could have been accomplished had one or even several telegraph wires been available to them.

The small pictures, transparencies, which, when passed behind the lenses of a magic lantern, have their enlarged duplicates cast on a screen, are familiar to all. The effects of photographic slides used in magic lanterns are nearly as well known as those of the old coloured slides. The photographic slides are made of glass, and the pictures they bear are shadowed on a transparent, sensitive medium, covering the surface of the glass. The glass slides could not be carried by pigeons; but sensitized films of collodion, having photographic impressions on them, could well be carried. The results obtained were so remarkable that a few more details of the subject may be given here. During the investment of Paris messages were received by the postal authorities in London for transmission to the beleaguered city. Certain conditions were attached to the privilege of using this channel of communication. A message might not contain intelligence affecting the war proceedings. A message was limited to twenty words. Postage at the rate of 5d. a word, and a registration fee of 6d. per message had to be prepaid.

By steps the method of conveying the messages gradually improved, and finally took the following shape:

On receipt of the messages in London they were set in type, and printed off on pages, including 200 messages each.

Assuming that correspondents took full advantage of their opportunities—each printed page included 4,000 words—upon which the charges would be:—

Postage.....	£83 6s. 8d.
Registration.....	5 0s. 0d.

Total for each page..... £88 6s. 8d.

The matter contained on sixteen of these pages was, by the process of microphotography, depicted upon a transparent film of collodion, measuring 2 inches by 1 inch.

Each film might consequently have had the messages upon which sixteen times £88 6s. 8d. or £1,413 6s. 8d. was payable for postage and registration; 18 of such films rolled together and inserted in a quill made up a pigeon load of one gramme, upon which £25,440 were the charges. This sum, at $\$4.86 = £1$ —is equivalent to \$123,638.40 for freightage on each bird load.

Postal communication between London and Tours was not cut off during the war. Tours is about 132 miles S.W. from Paris.

Pigeons carried out of Paris in balloons were collected at Tours. The quills with their charges of photographic films were attached to the tails of the pigeons, and by them carried into Paris. On receipt in Paris the films were opened out and spread on plate glass slides. Screens to receive enlarged picture of the slides—through the intervention of the magic lantern—were made of sensitized material, and thus were at once obtained enlarged photographs of the matter on the microphotographic films. The screens were then cut up into their separate messages, and these despatched to whom they were addressed.

From the figures given it may be deduced that one full pigeon load might have included 1,152,000 words. Supposing these to have been received for dispatch by telegraph from Tours, the following steps at least would have been entailed: The messages would have had to be read and checked and charged for; transferred to the transmitting clerk, and by him spelt over and transmitted; the receiving clerk would have also to spell over the whole and transcribe it, and possibly duplicating for record purposes might have been required.

Allowing an average of four letters to a word, the number conveyed from Tours to Paris in less than three hours by a pigeon would have been 4,608,000. By the telegraphic process these must have been spelt over at least twice, and thus tran-

scribed at least once before being sent out for delivery. Against this set the photographic process, by which the reading, spelling and transcribing is effected by light, mechanism and chemicals, almost instantaneously, and one may faintly realize the economy effected in this case through the use of pigeons.

I have purposely left out of the account the type-setting element in England, for I assume that the type-setting might have been dispensed with by taking microphotographs of the messages as they were received in manuscript. Moreover, it was not always necessary in Paris to despatch the messages to addresses. In a large darkened chamber many people assembled and read on the screen the news intended for them. Copies of the *Times* were thus published in Paris, and advertisements from friends in England were readily picked out by the spectators.

On the authority of the *Century Magazine*, for July, 1886, the carrying power of the pigeon, under some circumstances, would appear to be much in excess of 1 gramme. The *Magazine*, relating that during the United States yacht races in September, 1885, a pigeon service was extemporized by Mr. Arnoux, states:

"The messages then sent from sea were each not less than ten pages of manifold note, and were carried upon the middle feathers of the tail, to which they were fastened by fine copper wire, wound about and pressed flat, to hold the messages close to the feather. The editor of a newspaper served by these pigeons said: 'It gives me a peculiar sensation to receive copy from the hand of one I know to be out of reach upon the water, and to feel that he may talk to me, but I cannot answer him back. It is a wonder to me, after this experience, that the officers of any vessel, excursion steamer, yacht, sail or tug boat, should be willing to leave the shore without this means of communicating with it.'"

What has been remarked will have sufficed to show that in the homing pigeon we have a reliable, easily maintained and readily multiplied messenger for distances within 400 miles in all but extremely bad weather. The birds may be distributed to a system of scattered centres, and thence transported without difficulty by those who desire to avail themselves of their services.

It is not an easy matter in these days of steamboats, railways, telegraphs and telephones to persuade people unaccustomed to the use of pigeons that their employment can be beneficial. Perhaps the task may be most easily approached by some references to what has occurred within a few years in almost every country in Europe.

There—as here—there were neither railways, steamers, telegraphs nor telephones in the year 1800. The first railway engine, only a comparative success, was used at a Welsh colliery in 1804. It was not until 1830 that the first general traffic railway was opened between Liverpool and Manchester; and there was no telegraph service before 1837. Preceding those days messenger pigeons were scarcely heard of. They had been used, but only exceptionally. The London Stock Exchange employed them between London and Paris. Newspaper and betting men used pigeons, and there were races in Belgium. But, as said before, while Europe was without railways and telegraphs messenger pigeons were not generally heard of. Since 1830 the face of Europe has become a network of railways and telegraph lines. It is desired to bring forcibly under the notice of those who consider that railways and telegraphs entirely dispense with the utility of pigeons that within the last fifty years, while railways and telegraphs have been extending and multiplying beyond what would have been considered sane expectation in Europe, it may be said that pigeon service took its birth there, and has grown to proportions that cannot fail to excite wonder. In France, in Germany, in Austria, Italy, Russia, Spain and Portugal, the Governments now maintain numerous large pigeon service establishments. Four of these countries employ the birds in connection with the defence of their coasts; all of them include pigeon service as important departments of military organization; and all of them, with Denmark and Belgium added, encourage the civil population to maintain lofts.

Belgium—the cradle of homing bird sport—is peopled, it might almost be said, by loft-keepers. In 1885 it had over 1,000 pigeon associations. Yet there, in

the midst of universal spontaneous action amongst the people, the Government extends encouragement to breeders and trainers, by awarding liberal prizes for competition, and by affording special facilities with regard to transport over the railways.

The Secretary of the London Amateur Pigeon Society notes, that in seven provinces in Belgium there are records for 1873 of 1,045 races, receiving 22,656 prizes; 1874, 1,225 races, receiving 27,494 prizes. From only 12 places, and during the short period of only 35 days in 1874, 7,787 birds were started, the maximum length of course being 545 miles, and the average length $330\frac{1}{2}$ miles. In four races in 1875 an average of 1,654 birds started in each race for a mean distance of $246\frac{1}{2}$ miles.

More than 1,500 races are held annually in competition for 900,000 francs in prizes.

The *Century Magazine* relates that at Ixelles, one of the most enthusiastic centres of sport—a national sport, in which even children and ladies may take part—a company of militia was at drill early in the morning, to be free at the time the birds liberated in the races of the day should arrive. All went well until the cloud of returning birds appeared on the horizon, when there was an instant uneasiness in the ranks; then, as if with one impulse, the company broke, and rushed at full speed to their lofts in the town. The officer, having his back towards the birds, was speechless with amazement, until he saw the cause, when he too joined in the stampede, regardless of his accoutrements. The *Morning Press*, in comment, hoped “if this should reach the ears of the authorities, they would recognize the exigency of the occasion, and be lenient.”

Russia began pigeon establishments in 1874, at Warsaw, Moscow, and Kieff. Now, in small Poland alone the Government maintains the following lofts:—

Brest Litevski.....	1,000 birds.
Warsaw.....	750 do
Ivangarod	500 do
Nova Georgiensk.....	500 do
Louminetz.....	250 do

At an annual cost of \$3,742.20.

The staff superintending these consists of: 1 lieutenant-colonel, 4 subaltern officers, 12 trainers, 24 servants.

Half a bushel of grain is allowed daily for every 100 birds.

The Russian vote for pigeon service is \$10,000 annually.

Successful experiments were made in grand manœuvres of the Russian army in using pigeons to keep up communication between a detached turning force and the main body. On such occasions telegraphs would be extremely exposed, or might be impracticable.

Russian cavalry scouting parties will probably be supplied with birds.

A few years ago three millions of pigeons were taken into France in the course of one season for training, from Germany and Belgium.

The German Government in 1885 had nine military lofts. Now it has lofts at Strasbourg, 600 birds; Metz, 600 birds; Wurtzburg, Mayence, Cologne, Wilhelmshaven, Kiel, Dantzic, Tomming, Schwetzinger, near Manheim, Thom 1,100 birds, Posen, etc. The whole of the German frontier is connected by pigeon post with the interior and army headquarters. The whole of its northern coast is studded with pigeon stations under the control of the Minister of Marine.

Experiments have proved that pigeons bred on board ship have no difficulty in recognizing their own vessels amongst a number of others.

An ordinary German loft has 200 birds. In 1883-84 the German vote on this account and visual signaling was \$8,500.

The German pigeon service is now the most extensive and complete in Europe.

There are 350 private pigeon societies in the country. Of these, many train in directions indicated by their War Minister. The Emperor gives annually gold medals

for competition in races if not less than $248\frac{1}{2}$ miles ; the Minister of War and of Agriculture also grant prizes.

In Austria the first private loft was established in 1873. The Government began work in 1875 at Komorn, and then in 1882 at Cracow. Up till lately Austria had chiefly directed attention to pigeon service for mountainous districts, where military telegraphs could not be laid with sufficient rapidity, and visual signalling is constantly obstructed by intervening elevations.

In Italy the military pigeon system is extensive. The coast lofts train from seaward with a view to cruiser service.

During the squadron manœuvres pigeon reports had been received many days in advance of advices sent at the same time by despatch boat.

Italy has, moreover, connected Massowah and Assab, in Africa by pigeons.

The twelve principal Government lofts in continental Italy are controlled by the Engineer in territorial command at Rome.

In Portugal there are Government pigeon stations at Lisbon, Oporto, Setubal, Tameas, Vedras, Novas, Elvas and Mafra.

In Spain there are coast-guard pigeon stations to receive messages from cruisers intercepting enemies' vessels and to check smuggling.

In Denmark the War Office grants prizes for competition amongst private loft owners, who are very numerous.

France has taken the subject up thoroughly. In 1885 France is said to have had 75,000 trained birds in her postal service. Every one of her great fortresses has now about 400 birds, the engineering corps superintending their maintenance and training.

The different pigeon societies, of which there are not fewer than 300 in the country, are subject to military authority and requisition. They are required to train their birds in directions conducive to military ends. At periodical contests the Government awards Sèvres vases, medals, diplomas and various other distinctions. At the instance of the Government, societies' birds are carried at half ordinary fares, and empty hampers are returned free of charge. Besides the large societies there are small clubs and individual loft owners—all of whom have to make annual census returns of their birds,

The Colombophile Society, at Paris, has a loft of 1,500 pairs of birds, and supplies fortresses.

In 1885 France had eight military pigeon stations—Paris with its central loft at Mont Valerin, Vincennes, Marseilles, Perpignan, Lille, Verdun, Toul and Belfort—100,000 francs being appropriated for these. *

Now her inland system is complete, a recent article in a French military paper remarking: "In a word, all dispositions are made, so that when war breaks out, the service of messenger pigeons will not have to be improvised, as in 1870. An exchange of correspondence between the central authority, the governors of fortresses and intrenched camps is insured."

The United States took the question up in 1888, and the Army Signal Office established a loft on Key West Island, aiming, amongst other objects, at communicating between cruisers in the neighbouring seas and the mainland. Another loft was established on board the "*Newhamphshire*" at Newport, Rhode Island.

Early last year it was reported that from Key West birds had already been trained to bring messages from any easterly direction 100 miles seaward.

It is now time to submit to those who argue that railways and telegraphs make it unreasonable to promote the establishment of an organized system of pigeon lofts throughout the country—and to others who take no interest in the matter, because it has no detachable coupons—it is time to submit to such that they should reconsider their opinions, for it has been shown that during the last fifty years, over the continent of Europe—not the least intelligent and not the least experienced quarter of the world—there has spread an amazing system of railway and telegraph lines, and with

* Since the above was written, information has been received that a loft of 500 birds has been established at Brest for naval purposes.

these has developed the most wonderful use of messenger pigeon service. It has been shown that this has been arrived at through unanimity of opinion amongst the vast majority and most influential of technical experts in national defence, and with the assent and concurrence of the leading statesmen in Europe and the United States, who are not any of them ignorant of the uses to which railways and telegraphs are applicable.

Is more needed to prove that our feathered messengers should not be neglected by those of us wishing to strengthen our country's position?

The patriotism of every Canadian will accord ready approval and praise to the motives and aims of the enlightened Governments and officials who have been endeavouring to increase their national security. Are the approval and the praise to be accorded, but the example disregarded?

Men whose thoughts have dwelt on the circumstances of warfare need no reminder of the importance of keeping control over supplementary and alternative methods for rapidly transmitting intelligence. A word, however, may not be out of place here to others who have not considered the character of the slender thread which conveys thought, and even voice, to unlimited distances, with almost immeasurable rapidity and nearly uninterrupted regularity. So well nigh perfect is its action that many have ceased to reflect that it has its weak points.

In warfare it is not solely reliable. The message it carries may be drawn off at any point in its length. False and misleading information may be designedly passed through it from any point at which an expert can get hold of it. Its vitality is at the mercy of the elements. Snow may break it down, wind may throw it over, lightning may shiver its supports. The scout and the secret agent can destroy it when and where they choose.

In the case of an attack, the invader, at the cost of but a trifling pre-arrangement, might give many an idle hour to telegraph operators at the very instruments where the safety of their country most needed their whole energies.

By pre-arrangement any wire or any sets of wires might be severed at the instance of the enemy at a given hour if desired. What would be the effect? How would any large and active firm be situated if it found communication between its manager, heads of departments and clerks suddenly cut off? The normal smooth clockwork movement of the organization would inevitably be replaced by confusion and impending disaster.

How much more numerous are the vital parts in the machinery of national defence, and how much more exposed than those in the detached mechanisms of commerce?

All the details of mobilization, concentration and tactical movements in this country at this moment are dependent upon our telegraph wires. What a slender thread to carry our national safety?

With wires between army headquarters, divisional and brigade headquarters severed, we should be open to attack where the enemy purposely confused our arrangements.

In such a pass it is not too much to say that in organized pigeon service, and in that only, could there be found ground for expectation that the tables might be turned against the enemy. They would keep us informed of his movements, and would maintain our power to transmit orders uninterrupted.

The circumstance which gave a first impetus to military pigeon service was its improvised use at the siege of Paris, in 1870. In the course of a review of an article on messenger pigeons by an Austrian officer, an English military paper thus refers to the subject:—

"On September 2, 1870, the day of the battle of Sedan, one of the most experienced breeders of carrier pigeons in Belgium, M. La Perre de Roo, made the offer to the French War Minister, basing it on the assumption that from the information published by English journals, Paris would be shortly completely invested by the Germans, to furnish him with a supply of carrier pigeons for keeping up communication between Paris and the Provinces. His letter was never answered.

"After the appearance of the German army before the capital the Paris association for breeding pigeons—l'Esperance—generously offered to the Government all their carrier pigeons for aerial postal service, and to conduct the latter. M. Cassier, the president of the association, asked for an audience of General Trochu, but was received by a subordinate, who, after hearing the patriotic pigeon breeder, smilingly replied that he, M. Cassier, was the sixty-second person who had bothered him with carrier pigeons, and he hoped he would be the last.

"Meanwhile Paris, to the consternation of the inhabitants and the annoyance of the daily press, which had been constantly trying to prove that the immense city could never be properly invested by the forces at the disposal of the enemy, was cut off completely from the outer world.

"Notwithstanding that there were a great number of carrier pigeons in Paris, not a single bird had been sent out of the capital, so that it seemed entirely impossible to keep up communication with the Provinces.

"In this dilemma the French Postmaster-General, M. Rampont, hit upon the ingenious idea of sending off a number of pigeons by balloon. On September 25, at 11 a.m., the balloon—La Ville de Florence—rose amidst the plaudits of an enormous concourse of people, carrying besides the aeronaut, M. Maugin, three carrier pigeons and 6 cwt. of despatches. The wind carried the balloon westward until it disappeared from the eyes of the Parisians. But, on the same day, at 5 in the afternoon, two pigeons arrived at their home in Paris. Attached to the tail feathers of each of them was a label with the following words:—'We landed safely at the village of Vernouillet, near Triel, and are on the point of leaving for Tours with the official despatches.'

"The population of Paris, who for the greater part had probably never heard of the capabilities of carrier pigeons, were intoxicated with joy at such success. The newspapers were full of illustrations of this breed of pigeons, and printed most fabulous tales of their performances. Subsequently, a balloon was sent off every second or third day; altogether sixty-four balloons were despatched, and from the pigeons taken, some returned almost regularly to Paris * * *. Many performed the journey from four to six times."

The writer of the article states that seventy-three birds returned with despatches to Paris, and thence argues that only twenty pigeons really did the work.

The "Encyclopædia Britannica" states that fifty-seven was the number which actually did the work.

The bird which repeated the trip six times was named "The Angel of the Siege."

In addition to 156,000 official despatches, over one million private communications were carried by pigeons into Paris.

In French experiments with pigeons for naval use—the first attempt—made at Toulon, was to domesticate the bird on board the "St. Louis" artillery practice ship. The pigeon house was placed near two 7½ inch and two 9½ inch guns, firing an average of 600 rounds weekly. The aide-de-camp of the Vice-Admiral Commander-in-Chief at Toulon stated that the experiment to establish communication between a ship at sea and a pigeon loft a shore succeeded perfectly. The converse experiment was not so successful, but was to be repeated. The results, however, proved that the homing bird adapts itself perfectly well to life afloat and breeds there.* The pigeon house on the "St. Louis" had an inside capacity of 3 cubic metres, accommodating eight pairs of birds.

As to the use of pigeons for naval purposes, a sketch by Lieut. Wainwright, U.S. Coast Signal Service of Defence Arrangements, will give a fair general idea of their importance as auxiliaries. Lieut. Wainwright says: "An ideal system of transmitting intelligence coastwise and to seaward during a naval war would be one in which observation stations, connected by telegraph lines, were established at cer-

* Presumably the further experiments proved successful; at all events, a loft of 500 birds has since been established at Brest for naval purposes.

tain intervals along the coast; at each station trained men with the necessary instruments for receiving and sending visual signals; at certain of these stations pigeon lofts for furnishing pigeons to look-out vessels and receiving from them reports, and also for despatching birds with information to the outside stations of the fleet; also lofts at such stations as, from the position of the telegraph lines, are liable to have their connections interrupted, the birds being used to maintain communication when the lines are cut. All coast lines to be connected with the interior lines whenever practicable, in order to give additional security. The instruments necessary are heliographs, electrographs, semaphores, and at the most important stations captive balloons. By means of observation vessels also, furnished with signal instruments and pigeons, the point towards which the enemy is making would be known, and his progress along the coast followed by observers, so that the defending fleet might meet him, or acting as a flanking fleet, follow up and engage him at the critical moment. If the enemy's fleet break up into detachments the course of each will be known to the Admiral commanding the defence, and he can oppose the enemy with similar detachments or keep his fleet together, and overwhelm the smaller bodies with his united force. Thus, at a comparatively small cost, the effective strength of the fleet would be greatly increased to the greater security of the defence.

"In times of peace these signal stations could be utilized by the Life-Saving Service and Weather Bureau, and for the purpose of sending the usual commercial intelligence.

"As will be seen, the system adopted by the French approaches very closely the ideal one."

In Lieut. Wainwright's lucid sketch one cannot fail to be struck by the great importance attached by him to pigeon service.

The writer in the *Royal Engineer Journal*, whose reference to the siege of Paris has been quoted, remarks on the organization of military messenger pigeon posts:—

"If it is to be used as an auxiliary means, whether of offence or defence, it must be organized thoroughly, efficiently and on a large scale. A large fortress or other suitable place in the heart of the country must be selected as the central station, where the carrier pigeons needed for stocking the pigeon stations of the whole country must be bred. The selection of the stations which are to be connected mutually by carriers, their housing, feeding and tending, must be made the subject of careful study. Of course, only strategical consideration must be the guiding principles in selecting lines of flight, and the organization of the carrier pigeon post must be left to the general staff.

"Besides breeding pigeons in State columbaries, private breeders must receive every encouragement, so that in case of war a large supply of those useful birds may be always obtainable.

"The great military powers of Europe have recognized the importance of this means of intercourse and have made most extensive preparations."

Of the uses to which the bird is put in peace the *Century Magazine*, speaking of the United States, says:—

"In our country of magnificent distances and tardy messengers, pigeons are more largely employed as carriers that is generally known, inasmuch as the service is mainly for individual convenience. Very many business men in the cities communicate with home in the suburbs by pigeon post, or use the birds between office and factory. Farmers use them as messengers through the neighbourhood and from the post office and the town. Country physicians often have an apartment prepared for the birds in their conveyance, and carry the birds on their rounds as regularly as they carry their instruments and their bottles, using them to bring word later on from their patients and to send word home when there is need. And even New York brokers promise to follow the example of Mr. A. De Cordova, who says: 'I use my birds to bring the reports from Wall street to me at Chetolha, near North Branch.' Mr. R. D. Hume, of Fruit Vale, California, claims to use pigeons with complete success between his factories some three hundred miles to the north. Years ago certain of the Wells Fargo agents in the mountains of Nevada used pigeons to bring

them news from the nearest station the same day that by the regular means would not have reached them until the third day. There are many prominent men and capitalists in the vicinity of New York to-day who owe their prosperity to the foundation laid years ago through advices conveyed by pigeons in advance of the mail by stage. * * Very many of the merchant marine, especially in European waters, have pigeons on board for use in communicating with the vessel from the small boats away from them, or from the shore. The birds, it is said, never mistake another vessel for their own at the dock or in the harbour. It has been remarked of several flights that the birds in exercising, when far out of sight of land, will go away for hours at a time, and upon their return will have dried mud on their feet and legs, shewing them to have been ashore."

The passage from land to land across the Atlantic by the St. Lawrence is about 1,800 miles. Assuming that a vessel on this line has a good Irish bird and a good Canadian bird on board—then for only 900 miles will she be beyond communicating distance from the mainland.

Newfoundland fishermen and vessels engaged in the coasting trade and in navigating the inland lakes, explorers, surveying parties, and sportsmen in remote districts, would frequently avail themselves of the services of these birds were there lofts whence they might readily obtain them when required for use.

Who can estimate the mitigation of anxiety that pigeons might have afforded to the passengers of the "City of Paris" in her recent accident? At what a slight cost this relief might have been supplied!

Why should not all transatlantic steamers carry birds with them, to announce the approach to either coast?

The *Illustrated Daily Graphic*, in England, has its pigeon loft. Its birds brought to it a succession of sketches taken on board a steam launch following the course of the Oxford and Cambridge race; and from the train in which the Prince of Wales travelled to open the Forth Bridge its pigeons brought pictures of incidents *en route*.

Newspaper men here might receive early photographic copies of European news two or three days in advance of the arrival of the mails by vessels liberating messenger pigeons. The eastern Canadian press might exchange news in a similar way with the western press, and Canada generally exchange with the United States. With well-tested, reliable birds, it might even be possible to transmit official despatches between the British Embassy at Washington and Ottawa—more rapidly far than by mail.

It is earnestly hoped that not a few of those who read this article will consider it a citizen's duty to encourage the breeding and training of messenger pigeons as a means of furnishing abundance of innocent amusement to young and old alike, as useful helps in domestic and personal affairs, as servants of the press, as aids in the transaction of business, as assistants in commerce, as invaluable friends of the mercantile marine, and as indispensable auxiliaries to the navy and army in the time of our country's need.

D. R. CAMERON.

S U P P L E M E N T

OF THE

TWENTY-THIRD ANNUAL REPORT OF THE DEPARTMENT OF MARINE,
BEING FOR THE FISCAL YEAR ENDED 30TH JUNE, 1890.

R E P O R T S

OF THE

CHAIRMEN OF THE BOARDS OF

STEAMBOAT INSPECTION

AND EXAMINERS OF MASTERS AND MATES,

THE

TORONTO, MONTREAL, QUEBEC AND PICTOU

HARBOUR COMMISSIONERS,

THE PILOTAGE AUTHORITIES,

THE HARBOUR AND SHIPPING MASTERS, CERTAIN PORT WARDENS, TOGETHER
WITH STATEMENT OF WRECKS AND CASUALTIES AND LIST OF
REWARDS FOR SAVING LIFE,

CHIEFLY UP TO THE

31st DAY OF DECEMBER, 1890.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST EXCELLENT
MAJESTY.

1891.

SUPPLEMENT.

OTTAWA, 28th March, 1891.

Hon. CHARLES H. TUPPER,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit herewith Supplement to the Twenty-third Annual Report of the Department, being for the year 1890, containing the usual statements relative to merchant shipping; the reports of the Chairman of the Board of Steamboat Inspection, and Examiners of Masters and Mates; the reports of the Harbour Commissioners for Toronto, Belleville, Montreal, Quebec, Three Rivers and North Sydney; the reports of the Pilotage Authorities, of Harbour and Shipping Masters and Port Wardens, together with Statement of Wrecks and Casualties.

Together with these statements I have included the report of the Enquiry, held by me, into pilotage matters, at the Port of St. John, N.B., in January last.

I have the honour to be, Sir,
Your most obedient servant,

WM. SMITH,
Deputy Minister of Marine.

CONTENTS.

	Appendix No.
Pilotage Enquiry.....	1
Report of the Pilotage Authority:—	
Montreal	2
Quebec.....	3
St. John, N.B.....	4
Miramichi, N.B.....	5
Bathurst, N.B.....	6
Charlotte County.....	7
Halifax, N.S.....	8
Glace Bay, N.S.....	9
Pictou.....	10
St. Mary's and Liscombe.....	11
Sydney, N.S.....	12
Nanaimo, B.C.....	13
Victoria and Esquimalt.....	14
Yale and New Westminster.....	15
Prince County, P.E.I.....	16
Report of Merchant Shipping.....	17
do Steam Vessels Inspected for 1890.....	18
do Wrecks and Casualties.....	19
Report of the Harbour Commissioners:—	
Toronto	20
Belleville	21
Montreal	22
Quebec.....	23
Three Rivers.....	24
North Sydney, N.S.....	25
Report of the Harbour Master, Halifax, N.S.....	26
List of Harbour Masters.....	27
Masters and Mates.....	28
Report of the Port Warden:—	
Montreal.....	29
Quebec.....	30
Halifax, N.S.....	31
Port Hawkesbury.....	32
Pictou.....	33
North Sydney.....	34
Sydney	35
Yarmouth.....	36
St. Andrews, N.B.....	37
Prince Edward Island.....	38
Vancouver, B.C.....	39
Victoria, B.C.....	40
Shipping and Discharging of Seamen.....	41

APPENDIX No. 1.

THE PILOTAGE ENQUIRY, HELD BY DEPUTY MINISTER OF MARINE,
WM. SMITH, Esq., AT ST. JOHN, N.B., 29TH AND 30TH JANUARY,
1891.

The Deputy Minister of Marine, Mr. William Smith, under instructions from the Honourable the Minister of Marine and Fisheries, opened an investigation into the pilotage question at the Board of Trade Room, St. John, N.B., on Thursday, 29th January, 1891. An opportunity was given to all parties interested, viz., vessel owners, captains, pilots and the Pilotage Commissioners, to present their views on the subject.

It was agreed to take up the pilots' side of the question first.

The first person to give evidence was Pilot Bartholemew Rogers, who stated that he spoke on behalf of himself and his brother pilots as well. (A number of the other pilots were present).

Pilot Rogers first submitted in evidence the following statement:—

The net earnings of the pilots for the year 1890 was at the rate of \$560 per man. In previous years it was considerably less. The reason of the years 1889 and 1890 being in excess of former years was on account of the large amount of ice shipped from this port. But owing to good ice crops in the United States this season we will be without the extra pilotage received from that source. Therefore it will reduce our earnings to less than \$500 per man. Furthermore, if the bill about to be presented to Parliament when it meets is passed it will reduce our incomes \$3,685.95, and when taken from the earnings of any previous years it would reduce our incomes to \$387.35 per man. Following are the earnings of thirty-three pilots for the years 1885, 1886, 1887 and 1888.

1885.....	\$21,147 33
1886.....	23,755 25
1887.....	21,307 00
1888.....	22,476 75

With the expenses of six boats to be deducted from the above figures at the rates of \$1,000 per boat, and when you deduct the amount before mentioned of \$3,685.95 from the balance it would leave us about \$378.35 per man—that is, if the Bill about to be put before Parliament is allowed to pass. The Pilot Commissioners, to protect and enable us to gain a livelihood, would have to increase the rates on larger vessels, and that would be detrimental to the port. At the present time the chairman, Mr. H. D. Troop, has the matter under consideration, and we, the pilots of St. John, are willing to abide by the decision of the Commissioners, as we think that they should be able to give an impartial opinion, as they are all interested in vessels of different construction.

Pilot Rogers then stated the case on behalf of the pilots as follows:—We are willing and are trying to keep things as they are, or to leave it entirely to the Commissioners to do with the matter as they see fit.

Mr. BAIRD.—Are you agreeable to the present condition of pilotage as affecting steamers coming to this port?

RODGERS.—To a certain extent I am not.

Q. In what respects are you dissatisfied principally?—A. We are dissatisfied about the schooners of between 124 and 125 tons, that have been built within the past three or four years. We claim that they carry too much dead weight cargo for their amount of tonnage,

Q. Do you feel that these vessels are unfairly measured?—A. It's this way. There is $2\frac{1}{2}$ per cent. of their gross tonnage allowed for a sail room, and they never have over three yards of spare canvas. They are also allowed a space for a boatswain's locker, and that boatswain's locker is generally a desk, and he puts a marline-spike and a ball of spun yarn in it. We would be willing to let that stand, provided that we have the privilege to go on board of these vessels and see that the bulk-head always remains as it was when Mr. Barber measured the vessel, that there is no cargo put in it. My contention is that they put up this bulk-head, and after the vessel is measured they take it down and store cargo in it.

Q. Do you claim that this class of vessels ought to be subject to pilotage?—A. I certainly claim that according to the laws of the common council, when I was bound as a pilot, all vessels drawing 6 feet of water were liable to pilotage, and now the vessels of 6 feet draft are exempt.

Q. And you claim that there is an undue endeavour on the part of the owners to escape pilotage by alterations in the build of the vessel?—A. Likely.

Q. Can you name any vessel that has been altered in the way you say?—A. Well, if you will give me Mr. Barber, the measuring surveyor of tonnage, and two sworn men to go and measure them, I'll pay for it out of my own pocket. I know of a vessel that can carry 325 tons of dead weight cargo, with only 123 tons of register. That is the *Osceola*. My views are, that all vessels should pay a certain amount of pilotage. Here is a statement of the Canadian sailing vessels of from 80 to 250 tons register cleared from the port of St. John, N.B., to ports in the United States, for the year ending the 30th June, 1890, giving the name of the vessel, tons register, tons weight and tons measurement of cargo, as compared with the total of Canadian sailing vessels cleared from St. John, N.B., for the year ending 30th June, 1890.

	No. of Vessels.	Tons Register.	Tons weight of Cargo.	Tons Measure- ment of Cargo.
Vessels from 80 to 100 tons.	410	36,891	8,133	98,067
Vessels from 100 to 125 tons.	323	38,236	14,127	80,791
Vessels from 125 to 150 tons.	27	3,895	2,837	5,983
Vessels from 150 to 250 tons.	24	4,645	2,224	7,983
Grand total.	784	83,667	27,341	192,824

Total of Canadian sailing vessels cleared from the port of St. John, N.B., for the United States, for the year ending 30th June, 1890.—Number of vessels, 930; tons register, 96,278; tons weight of cargo, 34,894; tons measurement of cargo, 228,063. Balance of vessels other than those from 80 to 250 tons.—Number of vessels, 146; tons register, 12,611; tons weight of cargo, 7,553; tons measurement of cargo, 35,239.

By Mr. Baird:

Q. Then, I understand you that you think you ought to have pilotage on these vessels between 124 and 125 tons?—A. Yes; providing the Pilot Commission is willing to give it to us.

Q. Do you feel that it is fair to the rest of the shipping that the American boats should be exempt from pilotage—that is, the steamers of the International Line and the New York steamers?—A. No, sir; I don't. The Boston pilots get half rate on the steamers from Yarmouth on 10 feet of water both in and out. The half for the inward would be \$13.85, and for the outward it would be \$8.50. The pilots get that for each trip, and never have to bother speaking them. They simply go to the pilotage office and pay it.

Q. How many steamers are there regularly engaged in running to this port?—A. The International Line runs three or four boats, and there are two New York steamers.

Q. None of them pay pilotage?—A. No.

Q. Do most of these lumber-carrying vessels take pilots?—A. When it's a dirty, rough night they will stop and take a pilot; but when the wind is fair and the weather is clear the captains that are posted by their owners to shy clear of us generally go along themselves.

By Mr. Smith:

Q. Are you speaking of vessels that are exempt?—A. No, sir.

Q. What do coasters over 125 tons do?—A. Well, Canadian coasters and American coasters sailed by men transferred from Canadian coasters who own a small piece of the vessel themselves, we run a flag up to them, and they simply look on the opposite side. They don't see it. We ask them for pilotage, and they say they never seen us. We put it before the Commissioners, and it causes a great deal of trouble; but when there is a good case, and when the captains are put under oath, they simply acknowledge that they saw our flag or were spoken to by us, and the Commissioners make them pay up. The law is, that all vessels liable to pilotage must hoist a jack when they come into a pilotage district and keep it flying until they pass to the inner limits, and, if not, pay a penalty of \$40. But these schooners simply haul out in the bay a point or a point and a-half, and make believe they are going up the bay, so as to get clear of us.

By Mr. Baird:

Q. The captains say, that in case of a heavy storm or thick weather, if they required a pilot they could not get one. Is that true?—A. We lay-to in our boats of 30 tons as long as our canvas will allow us to lay-to. When the weather compels us to go in we go to the harbour that will give us the best chance to get on the ground quickly.

Q. And there is a good deal of that kind of weather?—A. Yes, sir.

Q. And the vessel that comes along while you are away has to take care of herself?—A. Yes.

Q. Is it not true that unless pilotage was compulsory they would all go by the pilot?—A. Far from it.

Q. Can you name any St. John master running between St. John and American ports who would voluntarily take a pilot if it was not compulsory?—A. I can; Captain Dixon of the schooner "Sower."

(Here witness told of a case of a captain who had made a bargain with a pilot so as to let him go on, and so that the captain, after paying the pilotage, would get a rebate from the pilot with whom he had bargained. Pilot Rodgers ignorant of the bargain, spoke this captain, and the captain ran on until pressed by stress of weather to allow the pilot to come on board and help him into Bliss' harbour).

By Mr. Purdy:

Q. Is it usual for coasters to be bought off?—A. This last two or three years I have not heard of a case.

MR. SMITH—What is meant by this buying off?

WITNESS—The full amount of pilotage is paid in by the captain. The pilot gets it, and then returns a rebate to the captain.

By Mr. Baird:

Q. How much pilotage would a barque of a thousand tons pay, boarded at the inner district, in ballast, and going out again loaded without transporting?—A. \$45 or \$50.

Q. Suppose she is engaged in the western ocean trade, how many trips would she make in a year?—A. Probably three.

Q. Take a coastwise schooner of 250 tons—how much would she pay in and out?—A. About \$30 if she came in light and went out loaded, or about \$40 if she came in loaded and went out loaded, with no transport.

Q. How many trips would such a vessel make in the year, continually engaged in the coasting trade between here and New York?—A. I would say eight trips was good work.

Q. If she was loaded both ways she would pay about \$320 a year in pilotage?—A. Something like that.

Q. Do you notice an increase in the amount of carrying done by American schooners from this port?—A. Yes, sir.

Q. In your opinion, which carries the most out of St. John, American coasters or Canadian coasters?—A. I think the Canadian.

Q. Is it not noticeable that American coasters are shoaler in build than the Canadian vessels of the same capacity?—A. Some of them are, because they have a centre-board.

Q. And consequently they pay less pilotage?—A. Yes, sir.

By Mr. Baird:

Q. The question that is vital is, are the pilots willing that the registered Canadian coaster engaged in the coastwise trade should pay any less pilotage than she pays now?—A. My idea would be to fix a tariff on all the vessels, so as to make up our fund.

Q. Would you feel satisfied with a system of charging upon the tonnage instead of upon the draft?—A. I don't think I would.

Q. Does it not bear heavier upon the small vessel than on the larger ones when you charge by the draft?—A. Yes; I think it does; but we have so much small trade that we would not have a living at all if you adopted the system of charging on the tonnage.

Pilot Rutherford here spoke up and said:—"The system of charge by tonnage is the only right and just way to govern pilotage."

Pilot Rodgers continuing, said:—"Last year we had 403 schooners that paid us pilotage, and we had only 64 brigantines, 24 ships, 150 barks and 38 steamers."

By Mr. Purdy:

Q. Would that be the average number of barks and ships that come here during a year?—A. That goes above the last few years. There was an increase in the schooners, too, on account of the ice trade.

By Mr. Baird:

Q. How many pilots are there now?—A. Thirty-one; we have had forty. There were thirty-three last year.

Q. Is there not too many pilots for the business?—A. Yes.

By Mr. Purdy:

Q. Has there been any effort made to reduce the number?—A. Only by the Almighty God.

Q. Would sixteen pilots do the business, or wouldn't ten men be able to pilot all the vessels that required a pilot?—A. No, sir. I have seen ten large vessels in the bay at a time wanting pilots.

By Mr. Ellis:

Q. Does the witness object to the proposition to add to the number of steamers that are already free, and, if so, what are his objections?—A. The reason I object is, that it would reduce the pilotage fees.

By Mr. Purdy:

Q. In most cases, could not the masters of coasting schooners bring them in as safely without a pilot as with one?—A. I can prove that they can't. This very month there have been no less than four coasting vessels lost within 50 miles of St. John because they had no pilot aboard. One of them was lost through trying to avoid the pilots. That was the "Trygve," owned by Mr. Lantallum. She knocked her bottom out on the foul ground. If the captain had flared his light, so that we could have seen him, we would have gone to his assistance.

Q. The captain claims that he could not get a pilot?—A. We can prove by the second mate that he asked the captain to show a light, and the captain said: "No; we'll try and get clear of the pilots."

Q. Do you know of any vessel being lost in the bay with a pilot on board?—A. Yes; but not many of them, according to the number that are piloted in the Bay of Fundy.

Q. Were these four vessels you speak of as being lost from not having pilots, were they liable to pilotage?—A. Two of them were—the “Trygve” and the schooner “Isaac Burpee.”

By Mr. Baird:

Q. Is it a fact that the “Isaac Burpee” came up the bay, and that no pilot spoke her?—A. Pilot Rutherford, No. 1 pilot boat, was looking for her, and could not find her.

Q. He did not get in as far as where the pilot boat was cruising for him?—A. No, sir.

By Mr. Meritt:

Q. Are the pilots making arrangements to increase their number?—A. No, sir.

Mr. THOMAS, Secretary of Pilotage Commission:—The Commission has promised to take an apprentice on next year. They recognize that for the protection of life and property, and for the interests of the port, that pilots are necessary. It will take about six years to make a pilot, and at the end of that time there will be ten or twelve of the present staff of pilots compelled to retire, as they will have reached the age prescribed by the Act. The Commission felt that they would not be doing their duty if they did not provide for filling up the vacancies.

By Mr. Schofield:

Q. What is your reason why this pilotage should be compulsory?—A. We served six years of our life for the common council, for which they promised to give us pilotage on vessels from 6 feet of water upwards to make a living. We never got any pay for our apprenticeship.

Q. Then you claim that on account of having served in that way for the common council, that in consideration of that you have a sort of a mortgage on the business of this port to get a living out of it?—A. Yes, sir; that is the reason why there should be compulsory pilotage. I also claim that there should be compulsory pilotage for the protection of life and property.

Q. Well, how is it that when vessels meet pilots in the bay that the pilots will sometimes make bargains with them to exempt them, and thereby endanger the lives of those on board, as well as the property?—A. Pilots that do that do it for their own pocket. It is done all over the world. It is simply an understanding with the captain of the vessel. It is the captain that wants to do it. He is to get a rebate. One winks at the other, and away they go.

Q. Say a vessel of about 150 tons—what would her pilotage be?—A. About \$25 or \$30.

Q. And what would this winking or bargaining reduce it to?—A. That takes about \$5 off.

Q. Then the owner or the captain gets this \$5, and the pilot don't have to go on board, but is free to go on other vessels?—A. Yes, sir.

Q. If the pilot gets another chance there is about \$20 gain to the pilot out of the bargain, and \$5 to the owner or captain?—A. Yes, sir.

Q. You think pilotage should be compulsory, for the sake of the protection it affords to life and property; and still, for the sake of \$20 on that schooner you would allow her to run the chance of being lost. Is that right?—A. I don't consider it right. It was done to some large extent a few years ago, but it is not done at all now.

Q. If these reasons for pilotage being compulsory apply to schooners, surely it is necessary that these large steamers carrying so many passengers and representing so much property should have a pilot?—A. Yes, sir.

Q. Do you know of the pilots violating their regulations with regard to steamers?—A. I know that the pilots have violated the rules with you in piloting the Furness Line steamers between St. John and Halifax. They took less than the fees and did the work.

Q. Do you know of any other steamers in connection with which the pilots have deviated from their rules, as laid down, that they should have pilots on board?—A. Yes, sir; I do. There is a steamer coming here from the West Indies. She

touches at Yarmouth and is liable to pilotage—the “Loanda”. (Witness then detailed the way in which the pilots had arranged with Mr. Baird in regard to the steamer “Loanda.” Said he:)

“We knew there was three opposition gentlemen from St. John in Parliament. They could do us no good. This Bill was snapped on us unawares, and so we got the leading Conservative gentlemen in St. John to telegraph to stop Mr. Baird. I afterwards saw Mr. Baird, and told him the amount of money we got and the expenses we were under. He says: ‘Why the devil, I thought you got more than that. I am willing to give you half rate on all vessels from 80 to 250 tons; and I am willing to pay you the same pilotage on my steamer that the International Line boats and the New York boats pay. I will endeavor, when Parliament meets, to have all these steamers put on an equal footing’. Mr. Baird said he would try to get legislation to make the international boats pay half pilotage. He said he was willing to pay on his steamer if the Commission made them pay. I saw Mr. Troop, and then saw Mr. Baird again, and decided that his boat was to go on the same footing as the International Line boats—that is, to go free of pilotage till Parliament met. The pilots decided this, because they thought that if they didn’t let her go free Mr. Baird might be able to do us some harm. The Yarmouth boat was to be on the same basis as the American boats if Mr. Baird got it arranged for them to pay half pilotage. There was nothing said about the Digby boat”.

Q. You stated this bargain to Mr. Troop, and he approved of it?—A. Yes, sir.

AFTERNOON SESSION.

The Enquiry relative to the West India steamer was resumed.

PILOT RODGERS.—I got a letter from Mr. Baird to go to Yarmouth and present it to the captain telling him that he was to accept my services at all times. I showed this letter to the other pilots and asked them to let this boat go, as she would be on benefit to them, as if they insisted that she should pay I was to have all. But I didn’t want to take her, so long as the American boats were clear. I didn’t approve of the arrangement; I was scared into it. I don’t know of any paper being signed in regard to the “Loanda,” by any of the pilots.

By Mr. Baird:

After this arrangement was completed, did she pay any pilotage?—A. Once; the first time after the arrangement. I think she made four trips altogether. She wasn’t spoken after the first time. We pilots came to the conclusion that the underwriters would pay dearly for her going without a pilot if she got into trouble. We were going to show Mr. Baird that we were not going to be made Jack-in-a-pinch of for him.

By Mr. Schofield:

Q. Do you know of any change with regard to this steamer since she passed out of Mr. Baird’s hands and came into the hands of my firm?—A. I know that myself and the rest of the pilots came to the conclusion that you were not a member in the House of Commons; we were going to make the boat pay us pilotage till the Government exempted her.

Q. Do you think it right that steamers should pay 30 to 40 per cent more pilotage than sailing vessels?—A. Yes, sir; I do.

Q. Why?—A. I was one of three pilots that went to the Custom House some years ago and got off the books three schooners, three brigantines and three barks, three vessels of every description—and took them to Mr. Thomas S. Adams to figure them out. After doing so he came to the conclusion that the steamers took away about 40 per cent. more cargo than the sailing vessels did, on the average, for the same amount of tonnage. To counteract that, we wanted the steamers to pay more than the sailing vessels. There are steamers that take away ten hundred standards of deals and only draw 21 feet of water, while a bark or ship of a thousand tons would go down to about 23 feet.

Q. Do you think vessels should pay pilotage according to the amount of cargo they carry?—A. Yes, sir.

Q. So far as the work is concerned, is the steamer or the sailing vessel the best for the pilot—does he not do his work the quickest and safest on the steamer?—A. Yes, sir; I think he can do it the quickest and easiest on the steamer, but I can't say about the safety. I think one is about as safe as the other.

Q. In regard to the selection of pilots to go abroad to bring vessels to this port, say from Boston, Halifax and other places, do you think the owners or captains should have the selection of the pilot?—A. I shouldn't think so, because we all have to go through the same examination, and are all capable persons, and on the same footing, so that there should be no select men among us.

Q. Would it not be to the advantage of the captain to have a pilot who was well acquainted with the coast?—A. Yes.

Q. Are all the pilots equally conversant with the coast?—A. We have to obtain a permit from the Commission to go to Boston or New York.

Q. For boats like the Furness Line steamers, coming here every fortnight, would it not be better for them to have one pilot right along, than first one and then another?—A. I can't see that one pilot would be any better for them than another. The captain has all the knowledge that is required till she gets in the Bay of Fundy, and any pilot should be competent to pilot her in the bay.

Q. Do you think it fair that the Furness Line boats coming here so frequently should pay pilotage and should be entitled to no consideration?—A. I don't think the Furness Line boats should pay any more pilotage than sailing vessels, because they very seldom take away much cargo from here. I don't consider that they should pay as much pilotage as a tramp steamer that comes here and goes away with a gut full of deals.

Q. Do you know of the loss of any steamers in the Bay of those that are exempt from pilotage, such as the International boats?—A. Yes; the "State of Maine" got ashore on Point Lepreau, the "New England" got ashore on The Wolves, the "Admiral" got ashore about 45 miles below here. The New Brunswick broached too in a gale of wind, shipped a sea and stove herself all to pieces. The passengers and crew wanted to leave her, but Harbour Master Taylor and some others happened to be aboard, and they took charge of the steamer and got her into a harbour of safety. The "Cumberland" was also ashore on Grand Manan last fall. I believe that if there had been St. John pilots aboard these vessels those accidents would not have happened.

By Mr. Skinner :

Q. Your position is, that the increase of steamer traffic between here and the United States and the establishment of regular liners to the West Indies and to England is a means of causing a reduction in the income of the pilots?—A. Yes, sir.

Q. The pilots, with the Commission, or otherwise, would like to arrange with those interested in shipping so that a fair rate could be arrived at that would be satisfactory to all interests?—A. Yes.

Q. Is the number of schooners of less than 125 tons now on the increase?—A. Yes, sir. The number of coasting vessels under 125 tons is very large, while the number under 250 tons is very small. The first aim of gentlemen building schooners is to have them under 125 tons, so as to escape pilotage, and the second aim is to get them under 100 tons, so that the captains can sail without certificates. The ones under 100 tons also get clear of the anchorage fees, and of harbour fees to a certain extent, so that a vessel of 99 tons is a great deal cheaper than one over 100 tons.

By Mr. Smith :

Q. These vessels of less than 125 tons, that carry more than twice their registered tonnage in dead-weight cargo—do you claim that they are not correctly measured?—A. I claim that they are all right—when Mr. Barber measures them, but that afterwards the spaces allowed for sail room and lockers are used for carrying cargo. We all know how the schooner "Perfetta" went across the Bay to be measured, so as to get her under the 125 tons.

Mr. PURDY.—Yes; and I would have taken her to Newfoundland if I could have got her under 125 tons.

J. WILLARD SMITH.—But you didn't get her under the 125 tons.

Mr. BARBER, of the Customs Department.—“As to persons removing the bulk-heads and using the space for carrying cargo, I never heard of such a thing. In the first place, a vessel has a perfect right to have a sail room and a space for his men and for a boatswain's locker; and if the bulk-head is put up properly the amount of space thus allowed must not be more than $2\frac{1}{2}$ per cent. of her gross tonnage. If he takes away that bulk-head the vessel could not carry any more dead-weight. He might get a few laths into it, but he couldn't get a deal into it. He might perhaps carry four or five tons more of coal.”

Pilot ROGERS.—According to the table prepared by Kieth Barber at the Customs House for me, the schooner “Osceola,” of 124 tons, carried 325 tons dead-weight, and the “Avalon” of 121 tons, carried 283 tons of coal.

Mr. MERRITT.—I could name a number of vessels that carry more than twice their registered tonnage in dead-weight cargo. I believe it is tending towards the building of badly-shaped vessels, having to build them under 125 tons to avoid pilotage. It costs about \$300 a year pilotage for one of these coasting schooners over 125 tons.

By Mr. Smith :

Q. If vessels up to 250 tons were exempt, it would tend to a better class of vessels being built?—A. Yes; vessels that could go into the West India and southern trade in winter instead of having to lay up, as these 124-ton vessels have to do.

Mr. SCHOFIELD.—“Speaking of the unfairness of the pilotage rates upon the smaller vessels, as now applied, according to draft, we find that taking a number of the larger vessels, such as ships and barks and steamers, and comparing them with a list of schooners, applying the pilotage regulations the same to both, the steamers paid $4\frac{1}{2}$ cents per ton on their net tonnage, the ships and barks paid 4 cents, the brigantines $10\frac{1}{2}$ cents, and the schooners from 124 tons up to 290 tons paid 18 cents per ton. This shows that the bigger the vessel the more favourable are the rates for her. Besides this, the schooner makes so many more trips than the larger vessels that the rates bear much harder on her in that way, too.”

By Mr. Purdy :

Q. You believe that the vessels measured outside of St. John are measured wrong?—A. Yes; I believe the “Osceola” was measured wrong.

Mr. PURDY.—The same man that measured the “Osceola” measured the “Perfetta,” and although she is about the same dimensions she did not come under the 125 tons.

Mr. J. W. SMITH explained that the difference in the measurement of the vessels was due to the difference in the allowances made for deductions at Windsor and St. John before the persons who did the measuring had received notice of the change that had been made in this respect by the British Board of Trade.

Mr. SKINNER.—Do you think if compulsory pilotage was done away with that a sufficient staff of pilots could be kept up for the requirements of the foreign vessels coming to the port?

J. W. SMITH.—Yes; I do.

Q. Have you any remedy to propose to keep these men in existence?—A. I am strongly opposed to the law which exempts steamers running between here and Boston and New York; I don't see the equity in the law that exempts these steamers and puts the charge upon schooners in the same business and upon other British vessels trading with the port. I feel that the pilots that could not get a living at their own business could readily engage in some other occupation that would yield them quite as much money as they now earn. I don't think we should be forced to pay for services we do not require. Take away the compulsory pilotage, and the men will always be on the ground when they are wanted. I have nine vessels, and in ten years my masters have not met with an accident in coming into the harbour of St. John, and they never take pilots.

The DEPUTY MINISTER.—You would recommend that the privilege of exemption from pilotage be withdrawn from the steamers on the coast, and that schooners up to 250 tons should be exempt?

J. W. SMITH.—Yes, sir.

Adjourned till 10.30 o'clock, Friday.

30th JANUARY 1891.

The Enquiry was resumed on the 30th day of January 1891, Mr. SMITH, Deputy Minister of Marine, presiding.

The Deputy Minister asked: Is it your opinion that if vessels up to 250 tons were exempted from pilotage that a better class of vessels would be built?

J. W. SMITH.—By all means. I am building two vessels, and if I was sure that the proposal would pass I would increase their dimensions at once.

The DEPUTY MINISTER.—Has the McKinley Bill increased the business of this port with the American market?

J. W. SMITH.—Not at all. The lumber market of the United States has been exceedingly dull since then and the business has been less instead of greater.

Mr. SKINNER.—In Boston a vessel drawing 7 feet would pay \$1.65 a foot and one drawing 25 feet would pay \$5 a foot, so that the rate there is made less on smaller vessels. How would it suit here?

J. W. SMITH.—It would suit much better than the present system. The rate at St. John now is three times as high as at Halifax. The pilotage on a vessel ranging from 125 to 200 tons would be \$40 in round here; at Halifax the same vessel would and pay \$8 in and \$5 out, or \$13 all together.

Mr. SKINNER.—The Messrs Rourke of St. Martin's, are now constructing a vessel of 135 tons, and Ingram & McKean are building one of 250 tons; therefore, it would seem that it is not universal to build schooners under 125 tons.

Mr. PURDY.—I have a share in the vessel Rourke is building, and he is under \$500 bonds to make her come under 125 tons.

Pilot HENRY SPEARS, called.—My view is to let the pilotage system stand as it is. I don't think that vessels should be free from pilotage up to 250 tons. I don't think it would tend to a better class of vessels, I don't think there are too many pilots. Sixteen could not do the work, for I have seen seven or eight schooners and three or four ships or brigantines coming into this harbour at one time. I would recommend that about 30 pilots should be maintained. There are 31 now. My income from pilotage last year to myself was between \$600 and \$700. Four of us go together in a boat and share what is made between us every month or two months. Some boats are outside while others are in getting repaired or cleaned up.

By the Deputy Minister:

Q. Are you employed half your time?—A. Yes; I am outside pretty much all the time in my boat.

Q. What is your opinion about steamers?—A. I think they ought to pay a yearly license to the pilots.

Q. Do you think that the coasting vessels are taxed higher for pilotage than any other class?—A. I think they are a little too much.

Q. Do you think that if the American steamers were made to pay pilotage that it would make them employ St. John pilots instead of American pilots?—A. I think that would be the result. I would be in favour of vessels of 80 tons and upwards paying pilotage at a lower rate, according to the draft of water.

Q. Would you favour the system of charge by tonnage?—A. I would, if it would give the same gross amount of pilotage. I also think the pilotage system should be continued compulsory. If it wasn't compulsory I wouldn't stop at the business 24 hours; I would not be fit to go master of a vessel. I have been in the piloting business since I was 12 years of age, and my father before me.

By Mr. Schofield:

Q. You say it costs about a \$1,000 a year to keep up a pilot boat?—A. Yes; my boat, it does. It is made up in repairs and wages of the crew and other expenses. We have to hire two men, and to feed them on board the boat, from about the middle of February till nearly Christmas. The wages would amount to about \$300 a year for wages.

Q. What is the largest amount any one man got out of a year's piloting?—A. About \$1,200.

Q. I am informed that a certain pilot got \$1,800?—A. That much may have been marked down to him, but he never got that much for himself. He had to divide with someone else.

Q. What do you think about steamers?—A. I think they ought to pay more than a sailing vessel—that they ought to be charged on the amount of cargo they took. A steamer of 1,200 tons draws 12 feet of water and a Norwegian bark draws about the same, but the steamer takes away about twice as much cargo as the bark. The bark may probably require three or four transports, and her pilotage will amount to about \$100, while the steamer's would only be about \$60. That is why I say that steamers should pay more pilotage.

By Mr. Schofield:

Q. Is it not a fact that the pilot's work is done easier on the steamer than on the sailing vessel?—A. Yes.

By Mr. Purdy:

Q. Is it not your opinion that one half the pilots would do the service of the port?

Pilot RUTHERFORD.—Yes.

By Mr. Schofield:

Q. There is a system here called, the turn system, which means that when pilots are wanted to go away from the port to bring a vessel here, application has to be made to the Commissioners and the pilots are sent in their turn. Do you think that system a right or proper one, or whether the captains or owners should have the right to select their own pilots?

Pilot RUTHERFORD.—I don't think it a proper system. I think the Commissioners should select, and that the system of turns should not be a hard and fast one.

Mr. J. U. THOMAS here rose and said: "I would like to give some information about the earnings of the pilots. Pilot boats No. 1 and No. 2 do better than the others. About ten men out of the lot would make \$800 or \$900 last year. Only one or two would make more than that. I think the increase in the shipments of ice made the revenue larger last year.

By Mr. Schofield:

Q. Are the meetings of the Commissioners private or are they open to the press?—A. Any persons who had any subject coming before the Board were always notified when the meeting was to be held. The meetings were never advertised.

Q. Was there any paper signed by any of the pilots in connection with the arrangement with the "Loanda"?—A. Two or three of the pilots signed a paper.

By Mr. Merritt:

Q. How could that steamer get cleared from the Custom house?—A. By an order from me that she had paid her pilotage.

Q. Did you sign such an order?—A. I certainly did.

Q. Was this done with the countenance of the Commission?—A. I don't know whether it was or not.

(Mr. Thomas is secretary of the Pilot Commission.)

This finished the evidence on the part of the pilots, and the hearing of those representing the shipping interests was then taken up.

Captain William HAMLIN was first called. He stated: "I am a master mariner, and have been in the coasting business in schooners of from 90 to 160 tons for the past thirty years. I am now in a vessel of about 124 tons. I coast between here and New York and other western ports. The last four vessels I have built have been about that tonnage in consequence of the pilot law. These vessels are not fit for the Southern or West India trade, and we would build a larger class of vessels, only for the pilotage. I never employ a St. John pilot, because I don't consider it necessary. I got ashore but once; that was 25 years ago, but didn't loose the vessel. I never lost a vessel in my life."

Q. Would you consider it a hardship if the law was changed so as to make pilotage compulsory on vessels down to 80 tons?—A. That would drive me out of the country. I am on the verge of going now. Our best men are getting certificates

from the United States and are running American vessels as a result of this pilotage business. I don't think a man should be compelled to pay for services he don't want.

Q. What effect do you think it would have if the law exempted vessels up to 250 tons from pilotage?—A. We would have a better class of vessels in the coasting trade. I consider the present pilotage law an injury to the port of St. John. If the law was changed in the way suggested a larger class of vessels would soon be built, and the tonnage of the port would be increased, instead of having the work go into the hands of American vessels. There is a greater demand for large vessels now than there was five years ago.

By the Deputy Minister :

Q. Do you consider that the Americans have kept pace with the Canadians in lighting up the coast and furnishing fog-alarms?—A. I think they have. All the warnings along the coast are just as good as ours. There have been great improvements made since Confederation along our coast, and they were very much needed; but they have also been continually improving on the American side. Our coast and theirs is very well guarded now in that respect, and it is much easier for us to pilot ourselves to-day than it was a few years ago. The necessity for pilots is much less now than then.

By Mr. Purdy :

Q. Do you consider that these shoal-built 124-ton coasters will last as long as a deeper vessel?—A. No; these shoal-built coasters carry such a heavy deck load that it is apt to strain them, where, if she took a larger cargo below deck she would carry it easier and better. The principal thing these vessels have to depend on carrying from this port is lumber and they are mostly built just for carrying that.

By Mr. Merritt :

Q. Are these shoal-built vessels suitable for the West India trade?—A. I think not; I would much rather have a deeper vessel.

By Mr. Schofield :

Q. In your opinion, are the captains of the vessels from 80 tons up to 125 tons capable of navigating their vessels without pilots?—A. They are, all of them, in my opinion.

Q. You don't think the employment of pilots for vessels of 80 to 125 tons is necessary for the protection of life and property?—A. No; not at all.

Q. The owners of the schooners from 125 to 250 tons are asking to have them freed from pilotage to which they are at present liable. Do you think that the captains of those vessels are capable of navigating them without the assistance of pilots?—A. I think so. In most cases they have worked their way up from smaller vessels.

Adjourned till 2.30 o'clock.

Captain HAMLIN re-called.

By Mr. Purdy :

Q. Do you sail your own vessel?—A. I have always sailed my own vessels.

Q. Do you keep them insured?—A. I never insured a vessel in my life.

Q. Do you never employ a pilot?—A. No; I would rather trust my vessel in my own hands than in the hands of a pilot.

By Pilot Rodgers :

Q. Can you sail your vessel cheaper if you carry two-thirds of the cargo on the deck?—A. It costs more to put it out of the hold, but I never sailed a very deep vessel.

Captain WILLIAM B. McLEAN called.

I am a master mariner, and have been engaged in the coasting trade from St. John for about 23 years. I stopped home two or three years out of that time. I now run a vessel of 120 tons. I use no pilots at home here.

By Mr. Baird :

Q. Do you recollect the pilotage regulations to the westward. Is there compulsory pilotage in Massachusetts?—A. No.

Q. In New York?—A. Yes.

Q. What do you carry chiefly?—A. Lumber.

Q. How many trips do you make in the season?—A. This year I made eight, and last year nine trips.

Q. Do you ever employ a pilot?—A. No; I always got along without a pilot. I never had a bad accident in the Bay of Fundy. I once got ashore outside the bay, going into Moosepeck Harbour, Me.; but that was as much through my own carelessness as anything else.

Q. What do you think about this question, whether vessels over 125 tons and up to 250 tons should be exempt from pilotage? A. Well, the same class of men that sail the 124 ton vessels sail them. It would not be for the safety of the vessel that they would be necessary. A pilot has stated here that we could only sail our vessels in fine weather. I think we sail them in all weathers.

Q. Does the question of pilotage interfere with your handling a larger vessel?—A. Yes, sir; it does. I use this class of vessel to escape compulsory pilotage. I have been wanting to build another, and have been waiting to see if anything would be done with the pilot law. I do not find this kind of vessel suitable for the southern trade. She is too small.

Q. Do you think the present pilotage regulations stand in the way of the building up of a larger class of vessels.—A. Yes; I do.

Q. Do you keep your vessel insured?—A. No, sir; I take the risk myself.

By Mr. Skinner :

Q. What would be the difference in the rate of pilotage on a vessel of 130 tons and one of 230 tons. How much more water would the increased 100 tons draw?—A. That is a good deal according to how the vessel is built; about 3 feet, loaded.

Q. Do you think that a corps of pilots ought to be kept up for the commerce of this port?—A. I think there should be pilots kept up for strangers and foreigners.

Q. In case the coasting trade was made substantially free the pilotage would have to rest mostly on the deep-sea trade?—A. Yes, sir.

Q. Do you discharge your vessel the more cheaply the more deckload she carries?—A. Yes.

Q. Would it not be the aim to get shallow vessels built on account of that? A. No; not so shallow as these. The difference in the return cargo of a deeper vessel, and the fact that she could go into the southern trade, more than offsets the gain in unloading the shallower vessel.

Q. If you were coming up the bay with the wind to the east, pretty rough weather, would you not prefer to have a pilot than to go without one?—A. I should not trust my vessel in the hands of a pilot. I am not finding fault with them, but I would rather pay the dues and pilot the vessel myself. A pilot said we could sail our vessels up the bay on a fine day with a fair wind. We sail them up and into the harbour in all weathers.

Captain HAMLIN re-called.

By Mr. Skinner :

Q. Do you think if the pilots went out of the business that they could get employ as captains?—A. I can't answer that. It requires a special course of study and experience to go as captain.

Q. Under compulsory pilotage, if you were spoken by a pilot, what would you do?—A. I would pay the pilotage and come up myself. I wouldn't risk my property in the hands of a stranger. I don't want a pilot under any circumstances in the Bay of Fundy.

Q. That may be very well for a man like you or Captain McLean who have twenty-five or thirty years' experience. How would it be the first year or so after you were made captain and did not have the long experience?—A. I was like that when I first began.

Q. Did you have the same confidence then that you have now?—A. No; not at all; but I never took a pilot.

Q. Speaking from your experience, do you think that the captains of coasting schooners, as a rule, have sufficient experience to navigate the Bay of Fundy without a pilot?—A. Yes; as a general thing the masters of these vessels have served as mate and have worked up, and in most cases they own part of the vessel.

Q. What is your experience with reference to the discharging of deep or shallow vessels?—A. I would infer, the deeper the vessel the more expense in discharging her.

By J. W. Smith :

Q. In your experience, would not the difference of the return cargo of a deeper vessel more than outbalance the extra cost of discharging?—A. Yes; much more.

By Mr. Skinner :

Q. The return freight is very cheap. Is it a paying cargo?—A. Well, it doesn't pay to sail a vessel without a cargo, and whatever it pays is something. It is better to bring back coal cargoes than to come back in ballast or light.

By Mr. Purdy :

Q. Is it safe to bring back these flat-bottomed vessels of 124 tons and less without a cargo in winter?—A. We don't like to do so.

By Mr. Skinner :

Q. You are well acquainted with most of the captains in the coasting trade?—A. Yes.

Q. Are the owners of vessels very particular in selecting the captains for their vessels, in regard to their ability?—A. Yes.

Q. Has there been any noticeable loss in consequence of young men getting charge?—A. I don't know of any. The young men serve first as cook or sailor, then as mate, and then as master. They first take charge of a small vessel, and then of a larger one.

Captain WILLIAM HOGAN called, stated:—

I have have been a master mariner for 21 years. Have been on the coast and in the southern trade with South America and the West Indies. Have been in vessels subject to pilotage on the coast. I generally told pilots to come on board when I had to pay them; I never took them for the sake of the help. I did not like to pay them for nothing.

By Mr. Baird :

Q. Are these small vessels fit for the southern trade?—A. I speak from experience—they are not. They are too small and too shallow. I was offered one here for the West Indies, and I stayed home idle rather than go in a 124 ton vessel, and she was a brand new schooner.

Q. Do you feel confident in all weathers to handle your vessel in approaching this harbour?—A. Yes; I have done it.

By Mr. Skinner :

Q. Have you never accepted of the services of a pilot?—A. I have, when it was compulsory. That man (Rodgers) spoke me at the island. I said yes, took him along and took a tug boat and towed in. I have come in without being spoken to.

Q. What experience would you say a master should have to pilot a vessel up the Bay of Fundy and into the harbour of St. John?—A. If he has any brains he ought to know enough in a year. Coasters should be exempt from pilotage altogether. I can pilot a vessel into St. John as good as any pilot. I got enough experience in small vessels before I got into a large one.

By Mr. Schofield :

Q. Have you had any experience in connection with this buying off of pilots? A. Yes; I have been spoken outside Briar Island when I was coming along going out. The pilot would hold up his hand and I would go along. I knew what that meant. When I paid the pilotage I got \$5 back. I suppose I have taken money as much as ten or fifteen times from pilots. I have been in a vessel ten or fifteen years subject to pilotage. Wherever the pilots and captains get acquainted they they can always make a little trade.

Q. Does the pilot or the captain suggest this trade?—A. The pilot suggests it.

Q. Do you keep the money you get back, or give it to the owner of the vessel?

—A. If I took her along myself, and done the work, I considered the money belonged to me, and I always kept the \$5 I got back.

Captain PHILLIP FERGUSON called, stated :—

For the last seven years I have been in the West India trade as master.

Q. What is your opinion about this pilotage business?—A. I think the pilotage service of St. John is about as good as in any part of the world, and in my experience I was always glad to get one coming into the Bay of Fundy. I have sailed vessels all the way from 500 tons up to 1,500 tons. In the class of vessels I have been accustomed to I would always take a pilot if I could get one. I don't know anything about the coasting trade. I think compulsory pilotage is better than optional pilotage, as under compulsory pilotage their boats are kept up and you can always depend on getting a pilot coming into the bay. I think the pilots would find it difficult to make a living if it was not compulsory. If it was optional, when it was fine weather and he knew the place he would go without a pilot.

Q. Then, it would come substantially to this, that the pilots would only be employed when it was not fine weather?—A. That is all.

Q. That would demoralize the whole service?—A. I think it would. You would find more fishermen than pilots.

Q. Do you think all coasters require a pilot?—A. I shouldn't think a man would require a pilot when he is accustomed to the coast. You will find many a captain of a coaster that has more knowledge than many of the so-called pilots.

Q. Then you think that there is no need for small-sized vessels to have to pay pilotage when she would not require it?—A. The pilot has to make a living, and if you take it off him in the small vessels you would have to increase it on the larger ones. If I owned a schooner and was running between here and New York, I would try and get clear of pilotage if I could—that is, if I knew the coast well enough.

By Mr. Schofield :

Q. You stated that you were in some cases unable to get a pilot when you came into the bay?—A. I never came into the bay but once that I could not get a pilot, and then it was blowing strong and was heavy weather. Partridge Island was in sight when I got the pilot.

By Mr. Skinner :

Q. Would the knowledge acquired by service as a pilot do much towards educating a man to become captain of a ship?—A. It would, as regards handling his ship, but it is not the kind of experience that is required for master. The world is open to the master of a ship, but the pilot is confined to his local knowledge.

Q. Could not these pilots go mate of a coaster?—A. Not without a mate's certificate.

Q. Take a man past 50 years of age—could he shift from the piloting business and go to handling vessels?—A. I shouldn't think so.

By J. W. Smith :

Q. But if he was a young man, would it be a dreadful thing for him to qualify as mate?—A. If he had brains enough it wouldn't. At Cape Breton and other places you will find plenty of the captains and mates who are passed pilots.

Mr. BAIRD, M.P., who was conducting the investigation, or representing the shipping interests, in conducting it, said, that three men had just spoken whose character and integrity no one would question, and the way they had spoken showed that they were not prejudiced against the pilots. The vessel owners did not feel that the interests of the pilots should be cast aside, but they wanted this matter arranged fairly to both parties. The ship-owners and those interested in vessels were gratified to find that the Government had sent down a man to hold this investigation in whom they had the greatest faith that he would deal with the matter in a

fair and equitable manner. A hundred witnesses might be called on the side of the of the shipping interest, and they would all give evidence of a like character to that already given; so it might be well just to have a few give their names, and say whether they concurred in what the previous witnesses on the side of the shipping interests had stated.

Mr. S. SCHOFIELD, Agent for the Furness Line of steamers, was next called to state his views.

By Deputy Minister Smith :

Q. Are you against compulsory pilotage, as regards the coasting trade?—A. I certainly am. I am in favour of non-compulsory pilotage for everything. I think the system can be remodelled in such a way as to provide sufficient remunerative employment for a reasonable number of men, but not for thirty-one men. I am satisfied that twenty men would be sufficient to do the work, and perhaps fifteen would do. I don't think we should admit of a system that would annihilate the pilots. I don't think a voluntary system would do that. There are numbers of places in the world where there is optional pilotage, and there are always pilots there, so that captains can take a pilot or not, just as they choose. I think the law of supply and demand would regulate the thing.

Mr. J. WILLARD SMITH, a well known vessel-owner, rose and stated that he agreed with Mr. Schofield in every particular.

Mr. JOSEPH MERRITT, another ship-owner, also said that he agreed with Mr. Schofield. He stated, further, that he believed that the owner or the captain of a vessel should have the selection of his pilot when he required one, just the same as the owner has the selection of his captain. Continuing, he said: "Vessels between 125 and 250 tons are the kind of vessels we require, and they are not being built at the present time, largely on account of compulsory pilotage. These small vessels are too small to be used in the West India business in winter, and have to lay up. There are now seven American schooners laid up here over 125 tons, principally, I believe, because they are not suitable for outside business. There are six British schooners laid up, which, as a rule, are not fit for outside business or carrying to the West Indies; they are over 125 tons. And there are ninety-two British schooners under 125 tons, many of them new extra-built vessels, built of this peculiar shape, so as to carry a large cargo of lumber and yet to avoid pilotage regulations. Speaking of the small pay of the pilots, I don't think the captains of most of these vessels get more than about \$400 a year. They average about \$40 per month for eight or nine months. I feel that if these vessels that are laid up were fit for the West India trade that they would be employed in the winter time, and the captains would not be laying around doing nothing. If there is compulsory pilotage, no vessels competing with the other vessels should be exempt, either the West India steamers or the American steamers."

Mr. D. J. PURDY, vessel-owner, rose and said: "I agree with Mr. Schofield in every particular. I don't see why the New York and American boats should escape pilotage if it is compulsory. I don't think American pilots have a right to serve in our waters. I have a small vessel of 135 tons, which pays \$35 if she is spoken at the outer district, and one of 245 that pays \$45. If pilotage is to be compulsory, make it by the ton. My idea would be to have all up to 250 tons go free. If they required a pilot they could pay him. It would increase the value of the vessels here. I think we would have a better type of vessels if they were exempted up to 250 tons."

Mr. S. SCHOFIELD then rose to explain matters in connection with the piloting of the Furness Line steamers, for which he is agent. Said he:

"Since the loss of the steamer "Ulunda" in the Bay of Fundy, Mr. Furness has written to us that as there was apparently more risk in the Bay than he had imagined, in future he wished us to have a pilot on board of the steamers all the way from Halifax to St. John and from St. John back to Halifax. This involved considerable

expense, but all he stipulated was, that instead of one pilot and then another being sent for the steamers, that we should be allowed to select one pilot who we considered competent, and to get the best man we could to do the work. We informed the Pilot Commissioners of Mr. Furness' request, and they now have the matter under consideration. I am not quite authorized to say that they have agreed to it, but I think they will. They have so far agreed to it as to ask me to name a pilot. I named Mr. Cline, he having had the most experience between here and Halifax. He has to consult them with regard to financial arrangements. With regard to how that will bear upon pilotage matters, I may state that the steamers as coming here at present draw on an average 16 feet of water in and 16 feet out. Their draft of water is constantly increasing, in consequence of the fact that they are bringing and taking more cargo. But on the basis I have spoken of, it would make the pilotage of those steamers \$120 to each boat each time between here and Halifax. We are certain to have twenty steamers here within twelve months. So, twenty steamers, at \$120 each, is \$2,400 that the Furness Line will have to pay for the privilege of having a pilot on board, besides having to pay their expenses coming and going between Halifax and St. John. That is the sum that will be earned by the man who is chosen. He can, according to my estimate, attend to the whole twenty boats, and still have half of his time to himself. There are seventeen days between each trip, and it will only take eight days for each boat. The captains of these steamers get about a \$100 a month, so that the pilot working half his time will get as much as two of the captains and for a sixth of the work. This is the arrangement which is proposed in regard to Pilot Cline.

"As to matters in general, I claim that the pilotage business is not skilfully managed by the Pilot Commissioners. There are many grievances that we might speak of. I can inform you that not only do unfairnesses exist, but that communications signed by the leading ship-owners of this port, and sent to the Pilot Commissioners, in regard to some matter of interest to these owners have been ignored by the Commissioners. I have it direct from a gentleman, who stated that one of the Commissioners had stated to him that if the ship-owners and brokers had not sent that paper they would probably have dealt with the matter, but that on account of that they would not do anything about it. I think that the meetings of the Commissioners ought to be open, so that the proceedings could be reported and made public.

Mr. SCHOFIELD also favoured the idea of having pilot boats stationed permanently at stated points, so that they could be advertized, and people could tell where to look for them. Pilot Rodgers, however, contended that this would be an impossibility, as they were certain winds, or winds from certain directions which a pilot boat could not find sufficient shelter from in the bay, and in which she could not lay out.

Mr. G. S. PARKER, a vessel owner, said: "I agree with Mr. Schofield and the other shipping men, who have spoken. I think the pilotage should be done away with, up to 250 tons.

N. C. SCOTT, a vessel owner, said: "I agree with the other ship-owners who have spoken. I am interested in a few coasting schooners, and find it a great disadvantage in having to build them under 125 tons to escape pilotage. I don't think we should be compelled to take a pilot unless we want one. I say pilotage should not be compulsory. I think there are too many pilots; one-half the present number would be plenty.

Mr. J. U. THOMAS, Secretary of the Pilot Commission, here rose to explain, in reference to Mr. Schofield's statements that a communication was received by the Commission relative to the merchants selecting their own pilots, but that through the neglect of the secretary the merchants were not advised of the result of the deliberations of Commissioners. In the opinion of the Board, it was not desirable to return to the old system. He contended that non-compulsory pilotage would mean the annihilation of the pilots.

Mr. C. N. SKINNER, M.P., speaking for the pilots, said:

"If the schooners up to 250 tons were exempted from pilotage the pilots contend and I should say there was a great deal in their contention, that a large proportion

of the commerce now carried on in larger vessels would get to be done in vessels of under 250 tons, and that therefore they would not only lose the exempted schooners, as it might appear now, but they would lose a great deal more—that is to say, vessels that now come to the port of a larger tonnage than 250 would not then come at all, because the vessels of less than 250 tons would do the West India and southern trade, as well as the coasting trade, and that therefore the pilots, so far as their fees were concerned, would simply be decimated. Therefore, they want to make this point, that if the Department of Marine should come to the conclusion to have this Bill before Parliament, they want these matters to be considered, and instead of losing so much pilotage to them, let some other vessels pay a little more—that is to say, let vessels over 250 tons pay a slight increase on what they do now so that the pilots may be maintained.

Mr. PURDY.—If they put it on the steamers would it not help a great deal?

Mr. SKINNER.—It would be pretty hard to get pilotage from those steamers like the International Line boats, which have been coming here for the past thirty years without paying any.

Mr. SCHOFIELD.—They are very profitable vessels, and can afford to pay.

Mr. SKINNER.—The pilots feel that the New York boats should pay.

This concluded the investigation.

Mr. JOHN V. ELLIS, M.P., then moved :—

That a vote of thanks be tendered the Deputy Minister of Marine, Mr. Smith, together with an expression of the appreciation of all concerned in the investigation for the very able, fair and equitable manner in which he had conducted the Enquiry, and also for his patience in giving both sides a full hearing.

This was seconded by Pilot Rutherford, and carried unanimously, amid loud applause.

We the undersigned hereby declare that we believe the above to be a true and accurate report of the proceedings at the Pilotage Investigation held by the Deputy Minister of Marine at St. John, 29th and 30th January, 1891.

GEO. F. BAIRD,
C. N. SKINNER,
BARTHOLEMEW ROGER, *Pilot*.

APPENDIX No. 2.

REPORT OF THE PILOTAGE COMMISSIONERS OF MONTREAL.

HARBOUR COMMISSIONERS OF MONTREAL,
SECRETARY'S OFFICE, MONTREAL, 10th January, 1891.

WILLIAM SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I have the honour, by direction of the Harbour Commissioners of Montreal, as the pilotage authority, to transmit, for the information of the Honourable the Minister of Marine and Fisheries, the following report of the pilotage district of Montreal for the year ended 31st December, 1890.

There were no deaths or superannuations among the fifty pilots during the year; consequently, none of the apprentice pilots received their branches.

Pilot Hubert A. Bellisle, having attained the age of 65 years, was brought before the commissioners on 22nd April, and, after examination, granted a new licence for one year.

The accompanying statement gives the names, earnings, &c., &c, of all the pilots for the past season.

The total amount of pilotage dues therein shown was received from the following services, viz :—

British.

Steamships.....	\$50,113 90	
Sailing vessels.....	2,614 37	
	<hr/>	\$52,728 27

Foreign.

Steamships.....	\$2,770 95	
Sailing vessels.....	732 63	
	<hr/>	\$3,503 58
Total.....		<hr/> <hr/> \$56,231 85

In March an examination was held for those apprentice pilots who had been licensed five years and had fulfilled all the preliminary requirements of the by-laws.

Messrs. J. B. Nadeau and Aubert Naud presented themselves, and, having passed a creditable examination, were ordered to spend one year, making at least fifteen double trips between Quebec and Montreal with branch pilots. This order having been carried out, they now stand fifth and sixth in order for their branches.

One apprentice has been removed from the list, being now over age; and four young men were licensed during the autumn.

The following list shows the name, age, and residence of each apprentice pilot now serving his time under this authority:—

No.	Name.	Age.	Residence.
1	Brière, Arthur.....	33	Portneuf.
2	Labranche, J. S.....	34	do
3	Perrault, Alexis.....	28	Deschambault.
4	Dufresne, N. C.....	30	do
5	Nadeau, J. B.....	32	Lévis.
6	Naud, Aubert.....	36	Deschambault.
7	Bouillé, Narcisse.....	30	do
8	Léveillé, Joseph.....	27	Batiscan.
9	Sauvageau, Josephat.....	28	Deschambault.
10	Dussault, Napoléon.....	28	do
11	Perron, Sévere.....	32	do
12	Arcand, Barthélemi.....	28	Lachevrotière.
13	Bellisle, Prudent.....	27	Deschambault.
14	Arcand, George.....	26	Lachevrotière.
15	Toupin, Constant.....	24	Three Rivers.
16	Perrault, George.....	24	Deschambault.
17	Bellisle, Arthur.....	29	do
18	Belanger, Charles.....	20	Lotbinière.
19	Pleau, J. E.....	21	Ste. Anne de la Pérade.
20	Hamelin, Théodule.....	16	Grondines.
21	Perrault, Anthyme.....	22	Deschambault.
22	Raymond, J. N.....	20	do

Accidents to vessels were few, and only one was of a serious nature.

On the 12th of August an investigation was held into the grounding of the Spanish steamship "Catalan" on the 1st August while in charge of pilot Cyrille Bellisle, and approaching her berth at Windmill Point wharf, within Montreal harbour.

After hearing the evidence, the Commissioners decided that the grounding was due to want of proper care and diligence on the part of the pilot, and fined him \$40, on payment of which he was reinstated.

On the 6th of August the SS. "Lake Nepigon," when leaving the harbour of Quebec, ran into the barque "Isabel," lying at one of the wharves, and cut her in two.

The Commissioners, after the hearing of witnesses on both sides, decided that the accident was due to the pilot, Jean Arcand, and he was accordingly suspended until the 1st September, in addition to forfeiting his pilotage dues for the trip.

A complaint was received from Messrs. Kingman, Brown & Co., that on 2nd of September Pilot George Dufresne went on board the SS. "Coban," in Quebec, in an intoxicated condition.

The pilot was summoned before the Commissioners, and being, after due deliberation, found guilty, it was decided to withdraw his branch until such time as the Commissioners are satisfied that he has reformed his habits. At the close of the year the pilot was still under suspension.

On the 14th October a slight collision took place in Lake St. Peter between the SS. "Michigan," while on her way from Quebec in charge of Pilot A. Frenette, and the SS. "Ocean King," in charge of Pilot John Nault, who was following the former vessel.

After hearing many witnesses on both sides, the Commissioners decided that both pilots were to blame for having infringed By-law No. 97 A and both were censured, the former more especially; and warned that in the event of a re-occurrence of any such case the Commissioners will deal with it as severely as their powers will permit.

The maintenance of the buoys and beacons by the Sincennes-McNaughton Line was carried out during the season to the general satisfaction of the Commissioners.

The new temporary floating lights at Ste. Croix and Pointe aux Trembles (*en bas*), placed in September, were found of great service by the pilots and the shipping interest.

Early in the season, By-law 133 *A* was put in force, in place of 133. The new one enumerated eleven additional points to those mentioned in 133, where up-coming vessels have to give way to downward-bound ones.

The tariff of pilotage at present in force is the same as was transmitted in the report for 1888, and as has been in force since 5th March, 1877.

The following is an extract from it:—

Quebec to Montreal, and <i>vice versa</i> .		Downwards.	Upwards.
		\$ cts.	\$ cts.
Pilotage of vessels in tow of steamers, for each foot of draft of water.....		2 00	2 00
do propelled by steam do do		2 50	2 50
do under sail do do		2 80	4 20
Moving a vessel from one wharf to another in the harbour of Montreal, or from the harbour into the Lachine Canal.....		5 00	5 00

The amounts received and expended by the Harbour Commissioners as pilotage authority of the district were as follows:—

Receipts.

Trinity dues collected at Montreal.....	\$2,642 31
do do Three Rivers.....	34 01
do do Sorel.....	100 55
Sundry small amounts of poundage.....	22 28
Interest on investments and on cash in bank.....	2,567 58
Total	<u>\$5,366 73</u>

Disbursements.

Pensions to old and infirm pilots and widows.....	\$4,055 49
Messrs. Riddell and Common, for audit of fund	25 00
Postage on pensions remitted during the year.....	5 31
Messrs. Wulff & Co., refund of poundage, paid twice...	1 85
Total.....	<u>\$4,087 65</u>

The above receipts and disbursements were in trust for the Montreal Decayed Pilots' Fund, of which the annual report and statements were sent you on 2nd January, certified by Messrs. Riddell & Common, chartered accountants.

In addition, the Commissioners received in respect of pilots and pilotage, as follows:—

From Pilot C. Bellisle, amount of fine inflicted on him for grounding the SS. "Catalan"	\$40 00
And they disbursed the following:—	
On examination of apprentices.....	\$85 70
Messrs. Abbotts, Campbell & Meredith, for professional services.	30 00
Messrs. McLean, Kennedy & Co., amount awarded to SS. "Catalan" for extra expenses when aground.....	40 00
Stationery.....	10 00
Expenses of Quebec agent and office.....	605 00
Expenses of water bailiff, serving summons at Quebec.....	10 00
	<hr/>
	\$780 70
	<hr/> <hr/>

The deficiency of \$740.70 was made up out of the harbour revenue.

I have the honour to be, Sir,
Your obedient servant,
ALEXANDER ROBERTSON,
Secretary.

STATEMENT showing the Number of Branch Pilots for and above the Harbour of Quebec, on the Active List, on the 31st December, 1890; their Age, Residence, Number of Pilotages, Earnings, and whether employed on Special Service or on Tour de Rôle.

No.	Name.	Age.	Residence.	Date of Branch.	No. of trips to Montreal.		No. of trips to intermediate places.		Total No. of trips.	Earnings to Montreal.		Earnings to intermediate ports.		Total Earnings.	Remarks.	
					In.	Out.	In.	Out.		\$	cts.	\$	cts.	\$	cts.	
1	Bouille, Zéphyrin	62	Deschambault ..	Mar. 1, '55	12	12	..	..	24	1,361	00	..	..	1,361	00	Employed by Allan Line,
2	Belliste, Cyrille	63	do	Nov. 15, '60	10	9	3	2	24	698	76	110	44	809	20	do on Tour de Rôle—Fined on 19th August.
3	Naud, Augustin	64	Montreal	Dec. 4, '61	17	20	2	2	41	1,142	66	110	63	1,253	29	do by Hy. Dobeil & Co.
4	Belliste, Hubert A.	65	Deschambault ..	May 23, '62	10	4	1	..	15	562	43	19	50	581	93	do on Tour de Rôle.
5	Dufresne, Athanase	57	do	Mar. 2, '62	17	16	..	..	33	1,172	38	..	..	1,172	38	do by Ross & Co., Québec.
6	Gagnon, Pierre	63	Three Rivers ..	Nov. 27, '66	11	13	1	1	26	1,179	09	53	82	1,292	91	do by Allan Line—Member of Pilots' Committee, 1891.
7	Naud, Onésime	50	Deschambault ..	Mar. 16, '70	11	11	..	..	22	1,217	66	..	..	1,217	66	do by Allan Line.
8	Hamelin, J. Octave	57	do	do 16, '70	24	23	4	4	55	1,500	35	225	78	1,726	13	do by Intercolonial Coal Mining Co.
9	Chandonnet, Jos.	50	St. Henri de Lauzon, Lévis.	Aug. 2, '70	14	16	..	..	30	1,683	12	..	..	1,683	12	do by Beaver Line.
10	Bouille, Louis A.	51	Deschambault ..	Sept. 1, '70	10	10	..	..	20	1,133	72	..	..	1,133	72	do by Allan Line.
11	Baudet, Prudent	49	Lotbinière	Oct. 10, '70	11	12	..	..	23	1,299	39	..	..	1,299	39	do by Dominion Line—Member of Pilots' Committee, 1890.
12	Belliste, Elzéar	56	Deschambault ..	do 10, '70	15	15	..	..	30	652	87	..	..	652	87	do by Québec SS. Co.
13	Pleau, Joseph	53	St. Anne de la Pérade	do 10, '70	10	7	1	1	19	629	49	52	50	681	99	do on Tour de Rôle.
14	Brumet, Célestin	48	Montreal	Feb. 28, '72	15	20	..	..	35	1,741	36	..	..	1,741	36	do by Donaldson Line.
15	Belliste, Louis	45	Deschambault ..	do 28, '72	11	12	..	..	23	1,303	30	..	..	1,303	30	do by Dominion Line.
16	Caien, Damase	50	Portneuf	Oct. 1, '72	10	11	2	1	24	684	35	78	00	762	35	do by SS. "Grandholme."
17	Groleau, Uric	43	Grondines	do 30, '72	8	9	2	1	20	557	00	89	06	646	06	do on Tour de Rôle—Member of Pilots' Committee, 1891.
18	Frenette, Alfred	51	Portneuf	do 30, '72	11	14	..	..	25	1,260	63	..	..	1,260	63	do by McLean Line—Severely censured on 28th October.
19	St. Amant, Alfred	47	Deschambault ..	do 30, '72	16	16	4	5	41	870	63	247	81	1,118	44	do by J. & R. McLea.
20	Belanger, Philippe	52	Lotbinière	April 8, '74	10	11	3	3	26	642	16	163	69	805	85	do on Tour de Rôle.
21	Gagnon, Victor	52	Champlain	April 9, '74	9	10	2	1	23	694	53	86	00	780	53	Employed on Tour de Rôle.
22	Perrault, Narcisse	53	Deschambault ..	do 10, '74	14	14	..	..	28	1,460	50	..	..	1,460	50	Employed by Donaldson Line—Member of Pilots Committee in 1890; President of Pilots Committee in 1891.
23	Toupin, Trefflé	43	Lake Bonchette, Lake St. John.	Sept. 22, '74	9	14	1	1	25	739	99	50	25	790	24	Employed on Tour de Rôle and "Prince" during July and August.

24	Auger, Cléophas.....	44	Point Lévis.....	do	22,	74	14	15	.....	29	1,635	36	.....	1,635	36	Employed by Beaver Line—President of Pilots Committee in 1890.		
25	Desjardy, François.....	46	Lavaltrie.....	April	8,	75	10	4	2	2	18	443	57	88	75	532	32	Employed on Tour de Rôle.
26	Labranche, Ferdinand.....	45	Portneuf.....	do	8,	75	12	12	.....	.....	24	1,330	77	.....	1,330	77	do by Dominion Line.	
27	Perrault, David.....	49	Deschambault.....	do	9,	75	12	10	.....	.....	24	1,249	97	.....	1,249	97	do by Thomson & Ross Line.	
28	Gauthier, Alexis.....	44	do	Jan.	15,	78	12	10	.....	.....	22	1,164	14	.....	1,164	14	do by Allan Line.	
29	Boullé, Louis Z.....	42	do	do	16,	78	11	11	.....	.....	22	1,242	32	.....	1,242	32	do by Allan Line—Secretary Pilots Committee in 1890.	
30	Toupin, Joseph.....	41	Champlain.....	Nov.	15,	78	25	25	2	1	53	1,816	82	76	91	1,893	73	do by Black Diamond Line.
31	Gauthier, Laurent.....	41	Deschambault.....	Dec.	10,	79	12	13	.....	.....	25	1,446	53	.....	1,446	53	do by Dominion Line.	
32	Arcand, Jean.....	38	do	do	10,	79	8	9	1	.....	18	660	43	26	25	686	68	do by Tour de Rôle—Suspended from 8th Aug. to 1st Sept.
33	Nault, Deloivoie.....	39	do	do	10,	79	22	24	.....	.....	46	1,872	90	.....	1,872	90	do by Black Diamond Line.	
34	Gauthier, Wilbrod.....	39	do	do	10,	79	11	11	.....	.....	22	1,196	37	.....	1,196	37	do by Allan Line—Member of Pilots Committee, 1890.	
35	Mayrand, Louis.....	43	St. Anne de la Péradé.....	do	9,	80	23	24	9	8	64	1,189	45	514	86	1,704	31	do by F. C. Henshaw.
36	Dufresne, George.....	42	Deschambault ..	do	10,	80	9	5	.....	.....	14	562	87	.....	562	87	do by Tour de Rôle—Suspended from 30th Sept.	
37	Arcand, Norbert.....	38	Champlain.....	do	10,	80	9	15	1	1	26	812	82	66	19	879	01	do by Tour de Rôle—Member of Pilots Committee for 1891.
38	Toupin, Uldorie.....	36	do	do	11,	80	7	11	1	1	20	698	58	64	50	763	08	do by Tour de Rôle.
39	Boullé, Tancède.....	37	Deschambault ..	do	11,	80	11	11	.....	.....	22	1,103	11	.....	1,103	11	do by Hansa Line—Secretary of Committee, 1891.	
40	Arcand, Nestor.....	35	do	Feb.	20,	84	20	20	7	7	54	999	20	428	94	1,428	14	do by Carbray, Routh & Co.
41	Nault, John.....	34	do	do	20,	84	13	14	1	.....	28	1,284	37	23	44	1,307	81	do by Thomson & Ross Line—Censured on 28th October.
42	Dussault, Joseph.....	35	do	do	20,	84	17	20	2	1	40	1,294	24	76	44	1,370	68	do by J. & R. McLae.
43	Groleau, Gédéon.....	37	Grondines.....	May	20,	87	9	6	.....	.....	15	655	58	.....	655	58	do on Tour de Rôle.	
44	Bellisle, Néré.....	38	Deschambault ..	do	20,	87	20	15	1	.....	36	1,332	87	83	75	1,366	62	do by Black Diamond Line.
45	Perrault, Liboire.....	41	do	April	20,	88	10	8	3	3	24	515	69	156	25	671	94	do on Tour de Rôle.
46	Raymond, Wilfred.....	36	do	do	20,	88	12	12	.....	.....	24	1,259	59	.....	1,259	59	do by Thomson & Ross Line.	
47	Hurteau, Joseph.....	30	Contrecoeur.....	Mar.	20,	89	8	12	2	3	25	599	59	133	00	732	59	do on Tour de Rôle.
48	Perrault, Edouard.....	39	Deschambault ..	do	20,	89	11	10	2	2	25	655	73	104	50	760	23	do do
49	Boullé, Lydoric.....	34	do	do	20,	89	11	13	.....	.....	24	1,188	32	.....	1,188	32	do by Hansa Line.	
50	Dussault, Honoré.....	38	Stc. Petronille.....	July	16,	89	10	11	3	3	27	591	67	160	36	752	03	do on Tour de Rôle.
Total.....										.....	.....	52,990	23	3,241	62	56,231	85	

ALEXANDER ROBERTSON,
Secretary.

HARBOUR COMMISSIONER'S OFFICE,
MONTREAL, 10th January, 1891.

APPENDIX No. 3.

QUEBEC HARBOUR COMMISSIONERS' REPORT AS PILOTAGE
AUTHORITY FOR THE YEAR 1890.

(Under 36 Victoria, Chapter 54).

QUEBEC, 2nd January, 1890.

Hon. CHARLES H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—In compliance with the requirements of the Pilotage Act, 36 Victoria, chapter 54, section 4, I have the honour to submit the following report from the Quebec Harbour Commissioners as pilotage authority for the year 1890.

SERVICE OF THE PILOT STATIONS.

The operations of the year began by the departure of the pilot schooner No. 5 on the 17th April with ten pilots.

On the 29th of April, twenty-five pilots left in the pilot schooner No. 1, 10th May, four by the Intercolonial and 12th May sixteen by the same line.

Schooner No. 2 was despatched on the 14th of May with fifteen pilots, and on the 17th and 21st of the same month thirty-seven pilots were sent down *via* the Intercolonial Railway.

As usual, all the pilot stations have been provided with pilots during the season, through the Intercolonial Railway and the pilot schooners, and the service has been performed to the satisfaction of the Commissioners.

OLD PILOTS.

Previous to the opening of navigation all the old pilots, sixteen in number, who had attained the age of sixty-five and over, were summoned before the Commissioners under the 36th section of the Pilotage Act, in order to ascertain whether they could continue in the exercise of their duties for the ensuing year. After the usual examination, all were found able to remain in the active service, and their licenses were accordingly renewed for one year.

PILOTS SUPERANNUATED.

Only one pilot, Julien Dion, has been during the year placed on the pension list. This pilot had at the date of his superannuation reached the age of seventy-three, had until his last trip (when he grounded the SS. "Thornholme") a clear record of over forty years pilotage service without an accident or complaint, so that on this account, although found guilty, he was permitted to surrender his branch, and no penalty was imposed on him.

TRIALS.

Seven pilots have been brought before the pilotage authority during the season of navigation, six of them on complaints lodged by shipmasters or their agents and one (the investigation into the accident to the S.S. "Oregon") by the Commissioners themselves. In the above cases one pilot pleaded "guilty," three have been found guilty after trial, two acquitted and one withdrawn for want of evidence.

A statement annexed to this report conveys all the particulars as to the nature of the complaint and the result of the investigation in each case.

APPRENTICE PILOTS.

No change has taken place in relation to the apprentice pilots.

Although the present list contains nine names, only seven are to be counted, the two others, through their long absence, being considered dead. As stated in last report, these seven apprentices cannot be admitted to pass their examination before the number of pilots is reduced to 125, as provided for in section 8 of 45 Victoria, chapter 32.

COMPLAINTS AGAINST THE PILOTAGE SERVICE.

Only two complaints have been lodged this year against the pilotage service, one being preferred by H. Fill, master of the SS. "Elenor," and the other by Peter Duncan, master of the barque "Annot Lyle" in both those cases, after careful investigation the Commissioners were of the opinion that the pilotage service was not to blame.

ACCIDENT TO THE SS. "OREGON."

On the night of the 28th October the SS. "Oregon," upon entering the harbour and approaching her berth at the Louise docks, touched or struck some obstruction, breaking several of her propeller blades and doing such other injuries to herself that the vessel had to be placed in the Graving Dock for examination and repairs.

Notice of this having been given to the Commissioners, a survey was ordered of the locality in question by the Board's engineer and Harbour Master. The pilot, Bernier, who was in charge of the SS. "Oregon" was placed on trial; those steps being taken by the Commissioners for the purpose of arriving at the cause of this accident, as it was claimed by the pilot and assented to by the captain and chief officer that the vessel was in a fair way of the channel when she touched.

The lateness of the season prevented this examination being completed; but the Commissioners intend to resume it in the spring.

RECOMMENDATIONS FOR ALTERATIONS IN THE LIGHTING AND BUOYING OF THE PILOTAGE GROUND.

At a meeting of the Pilotage Authority, held on the 15th day of December, the following letter recommending certain changes in the lighting and buoying of the pilotage ground, was ordered to be forwarded to the Department of Marine, and was so forwarded on the 16th of the same month:—

"QUEBEC, 16th December, 1890.

"WM. SMITH, Esq.,
"Deputy Minister of Marine,
"Ottawa.

"SIR,—I am directed to acknowledge receipt of your letter of the 15th ultimo and to thank you for copy of Mr. Anderson's report, enclosed therein.

"The Commissioner note that he hopes to be successful in his proposed improvements of Bellechasse Light, and that he suggests a revolving or occulting light at Crane Island; this latter change, the Commissioners urge, should be carried out in time, for the opening of navigation next spring.

"The recommendations of the Commissioners last December, asking that the gun on Green Island be fired every fifteen minutes in fog, a more powerful fog-signal be placed on Bic Island, automatic buoy on north-west reef of Green Island, gas buoy east end Middle Bank Traverse, three miles below lower lightship, as a sure guide to make Traverse by south channel, and as a guide to or from north channel, also distinctive lights on gas buoys be again, urged for consideration.

"The wreck of the SS. "Canopus" on the Perce Rocks, and of the SS. "Thorn Holme" on Barret's Ledge, demand earnest attention to the dangers of that locality, and the Commissioners urge that a lightship, with an occulting light and a fog-alarm, be placed at Barret's Ledge, in order, as far as possible, to prevent further accidents.

"The Commissioners last December begged for a light on Orleans Island that would mark entrance to the harbour of Quebec; nothing has been done therein, and the lamentable accident to the Dominion SS. "Oregon," involving enormous loss to her owners, occurring in consequence of their being no marks at night for safe entry of a steamer, in a very forcible manner demonstrates the necessity of such a signal; but instead of a light on Orleans, the Commissioners respectfully urge that a gas buoy, with occulting light, be moored on the 6-fathom edge of shoal off graving dock, Point Lévis, which, with an occulting light the Commissioners intend to place on the Louise Embankment, will make the recurrence of such an accident impossible.

"The occulting apparatus on gas buoy, Crane Island channel, has proved such a success that the Commissioners urge similar apparatus be imported for buoys at Channel Patch Traverse and Pilgrim Shoal, and same to be ordered in good time, so that the change can be made when the buoys are placed on their stations next spring.

"The Commissioners respectfully urge the adoption by your Department of the above suggestions; they have received the approval of the president and members of the Board of Sea Pilots, and are essential to the shipping and general commercial interests.

"I remain, Sir,

"Your obedient servant,

"JAMES WOODS,

"*Acting Secretary-Treasurer.*"

DEATHS.

One pilot has died during the year—Narcisse Desprès. He was in his twenty-fifth year, and had been in active service during only two years.

DIRECTORS OF THE CORPORATION OF PILOTS.

At their annual meeting, held the 10th day of December, the pilots elected the following directors to their corporation for the ensuing year:—

Messrs. Joseph Fortier, Laurent Godbout, Auguste Desprès, Jean Baptiste Tremblay and Samuel Rioux, and at a meeting of the new Board, held the following day, Mr. Joseph Fortier was re-elected president.

Annexed to the present report are various statements, not therein alluded to, which contain all the information yearly conveyed to your Department by the Commissioners in their capacity of pilotage authority.

I have the honour to be, Sir,

Your most obedient servant,

JAMES WOODS,

Acting Secretary-Treasurer.

QUEBEC HARBOUR COMMISSION.

STATE of the Tides and Wind in the Harbour of Quebec during the Year 1890, to the 17th October.

(According to Record kept by Mr. J. E. Bernier, late Dock Master, Graving Dock.)

Date.	Wind and Tides.	Date.	Wind and Tides.
Jan. 20	Highest tide, 30 feet on gauge.	June 5	Highest tide, 27 feet 8 inches on gauge.
do 15	Lowest do 5 feet 2 inches on sill.	do 17	Lowest do 7 feet 8 inches on sill.
	Wind—West during 18 days.		Wind—West during 16 days.
	East do 10 do		East do 14 do
	North do 0 do		North do 9 do
	Calm do 3 do		Calm do 1 do
Feb. 21	Highest tide, 28 feet 9 inches on gauge.	July 5	Highest tide, 27 feet 8 inches on gauge.
do 22	Lowest do 5 feet on sill.	do 20	Lowest do 8 feet on sill.
	Wind—West during 13 days.		Wind—West during 25 days.
	East do 12 do		East do 5 do
	North do 0 do		North do 0 do
	Calm do 3 do		Calm do 1 do
Mar. 23	Highest tide, 28 feet 8 inches on gauge.	Aug. 31	Highest tide, 28 feet 2 inches on gauge.
do 25	Lowest do 5 feet on sill.	do 2	Lowest do 8 feet on sill.
	Wind—West during 22 days.		Wind—West during 19 days.
	East do 8 do		East do 12 do
	North do 0 do		North do 0 do
	Calm do 1 do		Calm do 0 do
April 21	Highest tide, 28 feet 8 inches on gauge.	Sept. 1	Highest tide, 27 feet 1 inch on gauge.
do 6	Lowest do 5 feet 6 inches on sill.	do 25	Lowest do 7 feet on sill.
	Wind—West during 15 days.		Wind—West during 17 days.
	East do 8 do		East do 14 do
	North do 3 do		North do 0 do
	Calm do 4 do		Calm do 2 do
May 6	Highest tide, 28 feet on gauge.	Oct. 6	Highest tide, 26 feet 7 inches on gauge.
do 17	Lowest do 9 feet 6 inches on sill.	do 15	Lowest do 9 feet on sill.
	Wind—West during 11 days.		Wind—West during 16 days.
	East do 19 do		East do 12 do
	North do 0 do		North do 0 do
	Calm do 1 do		Calm do 3 do

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, 2nd January, 1891.

 QUEBEC HARBOUR COMMISSION.

STATEMENT of Trials held during the year 1890 before the Quebec Harbour Commissioners, under the authority of the Pilotage Act 36 Vic., Chap. 54, and 45 Vic., Chap. 32, Sec. 4.

Names of Pilots Tried.	Nature of Complaints.	Dates of Trials.	Result.
Laurent Larochelle.....	For having, on the 14th May, grounded the bark "Canopus" on Persil Rocks.	30th May...	Pleads guilty.—Suspended to the 1st of June, 1891.
Julien Dion.....	For having, on the 19th July, grounded S.S. "Thorn Holme" on Barret Ledge.	8th and 22nd August.	Found guilty.—On account of 40 years service without complaint, allowed to surrender branch without penalty.
Théophile Corriveau....	For having, on the 5th August, grounded the bark "Udsire" on Red Island Reef.	25th, 26th and 27th August.	Found guilty.—Suspended for one month and pay his own costs.
Eugène Anctil.....	For having, on the 19th September, caused the bark "Magnificent" to collide with bark "Falcon" when leaving loading berth.	24th, 25th, 30th Sept., and Oct. 2nd.	Found guilty.—Suspended to the 1st of August, 1891.
Joseph Plante.....	For having, on the 13th September, grounded S.S. "Barcelona" on Red Island Shoal.	29th Sept...	Acquitted.
Joseph Gravel.....	For having, on the 9th November, ran the S.S. "Dominion" over the Crane Island Spit.	19th Nov...	Case withdrawn for want of evidence.
Camille Bernier.....	For having, on the 28th October, caused the S.S. "Oregon" to touch the ground at the mouth of the St. Charles River.	15th and 21st November	Acquitted.

Certified,

JAS. WOODS,

Acting Secretary-Treasurer.

HARBOUR COMMISSIONERS' OFFICE,

QUEBEC, 2nd January, 1891.

QUEBEC HARBOUR COMMISSION.

LIST of Apprentice Pilots acting immediately under the Quebec Harbour Commissioners' Pilotage Authority on the 31st December, 1890.

Number.	Names.	When Indentured.	Remarks.
1	George Dugal.....	11th April, 1871.	Absent since the fall of 1877.
2	Ernest Nolet.....	19th March, 1874.	Absent since the fall of 1878.
3	Adélard Vézina.....	23rd May, 1883.	It is stipulated in the indentures of those apprentices that they will not be admitted to pass their examination before the number of Pilots is reduced to 125, as provided for by the Act 45 Vict., cap. 32.
4	Jean-Baptiste Pouliot.....	23rd do 1883.	
5	Joseph Thivierge.....	23rd do 1883.	
6	Léonidas Lachance.....	23rd do 1883.	
7	Eudore Langlois.....	23rd do 1883.	
8	Herménégilde Pâquet.....	23rd do 1883.	
9	Frs.-Xav. Eustache <i>alias</i> Wm. Doiron	12th July, 1883.	

Certified,

JAS. WOODS,

Acting Secretary-Treasurer.

HARBOUR COMMISSIONERS' OFFICE,

QUEBEC, 2nd January, 1891.

STATEMENT showing the Number of Pilots for and below the Harbour of Quebec on the Active List on the 31st December, 1890; the Number who Retired, struck off the Active List or Died during the Year; the Number Temporarily Suspended; the Number who were unable to Serve; the Number in charge of the Government Steamers, &c., &c.

Number.	Name.	Age.	Residence.	Number of Pilotages Effectuated.			Casualties and Remarks.
				Inwards.	Outwards.	Movages.	
1	Régis Ménard...	75	St. Valer...	6	7	5	
2	Joseph Pouliot...	75	St. John, Orleans...	6	5	4	
3	Jean Dugas...	74	Quebec...	6	5	4	
4	Edouard Genest...	72	St. Pétronille, Orleans...	6	5	4	
5	Joseph Dick...	71	St. John, Orleans...	5	5	5	
6	George Andet dit Lapomte...	70	Garthby, Wolf...	5	6	4	
7	François Dallaire...	73	St. Laurent, Orleans...	5	4	4	
8	David Bouffard...	71	do	6	5	5	
9	Antoine Lapointe...	66	Quebec...	5	6	4	
10	Jean Chassé...	74	Cacoma...	6	4	4	
11	François Dumas...	72	Green Island...	6	5	4	
12	Gilbert Baillargeon...	68	St. Petronille, Orleans...	6	5	5	
13	Jos. Phil. Couillard...	68	Quebec...	6	5	5	
14	Julien Dion...	72	Green Island...	4	1	2	Tried the 8th and 22nd Aug. Found guilty and pensioned the latter date.
15	Jérémie Dufresne...	72	Quebec...	5	6	4	Employed all the season by the Allan Line of Steamers.
16	Antoine Gobeil...	62	St. Laurent, Orleans...	10	10	2	
17	Pierre Fontaine...	62	Quebec...	6	8	4	
18	Victor Demers...	65	Launzon, Lévis...	5	5	5	Employed all the season by the Thomson Line of Steamers. Tried the 29th September. Acquitted.
19	Joseph Plante...	60	St. Paul's Bay...	9	8	3	Employed all the season by a Collier.
20	Louis Thivierge...	61	St. John, Orleans...	5	5	4	
21	Charles Francis Brown...	62	Quebec...	7	9	4	
22	Paul Pâquet...	59	St. John, Orleans...	6	9	4	
23	Joseph Pouliot...	63	do	5	6	4	
24	George Normand...	60	Crane Island...	6	5	4	
25	David Dampour...	58	Trois-Pistoles...	6	5	4	
26	Charles Vézina...	56	St. Michel Bellechasse...	10	10	2	Employed all the season by the Allan Line of Steamers.
27	Numa Lachance...	56	do	14	10	2	do
28	Amibal Baquet...	55	Quebec...	14	14	3	Master, Steamer "Miranichi." Employed all the season by the Dominion Line of Steamers. Tried the 19th November. Case withdrawn.
29	Joseph Gravel...	61	do	13	9	3	One of the Directors of the Corporation of Pilots. Re-elected at last election
30	Auguste Couillard Després...	54	Launzon, Lévis...	5	6	5	
31	Jean-Bte. Pouliot...	49	St. John, Orleans...				

32	Jean Gobeil.....	49	do	7	4	5	Employed all the season by the Hansa Line of Steamers.
33	Joseph Pâquet.....	53	do	11	6	5	
34	Louis Edmond Mornin.....	52	Quebec.....	11	11	5	
35	Moise Lachance.....	53	St. John, Orleans.....	5	6	5	
36	Joseph S. Brown.....	56	Quebec.....	10	13	3	Employed all the season by the Dominion Line of Steamers.
37	Hubert Raymond.....	51	do	6	8	11	
38	Achille Danour.....	51	St. Valier.....	6	7	4	
39	Cyrille Lapointe.....	51	St. Laurent, Orleans.....	6	4	5	
40	Joseph Pouliot.....	47	St. John, Orleans.....	6	5	4	
41	Edmond Larochelle.....	47	St. Michel, Bellechasse.....	0	0	0	Master of Government Steamer "Napoleon III."
42	Ant. Thomas Chouinard.....	56	Pointe au Père.....	7	5	4	One of the Directors of the Corporation of Pilots. Re-elected at last election.
43	Laurent Godbout.....	47	St. Laurent, Orleans.....	0	0	0	Employed, all the season, by the Dominion Line of Steamers.
44	Adelme Pouliot.....	51	St. Laurent, Orleans.....	12	11	3	
45	Bart. Pepin dit Lachance.....	45	St. John, Orleans.....	6	7	5	
46	Frs.-Xav. Delisle.....	45	St. Romanuld.....	5	6	4	
47	Jos. Pepin dit Lachance.....	56	Quebec.....	6	6	5	
48	Damien Eugène Boulanger.....	47	Tadoussac.....	1	0	0	Master of the Saguenay Station.
49	Cyprien Langlois.....	45	St. John, Orleans.....	5	6	4	
50	Jean Delisle.....	46	do	9	8	3	Master of the S.S. "Greetlands."
51	Nazaire Curodeau.....	43	Quebec.....	5	9	4	
52	Charles Normand.....	44	do	11	11	3	Employed, all the season, by a collier.
53	Napoléon Rioux.....	45	St.-Pétronille, Orleans.....	6	5	5	
54	Jean-Bte. Tremblay.....	47	Quebec.....	9	11	3	Employed, all the season, by the Black Diamond Line of Steamers. Elected Director of the Corporation of Pilots at last election.
55	Rav. Baquet dit Lamontagne.....	45	Notre Dame, Lévis.....	16	14	3	
56	Frs.-Xav. Lamarre.....	44	St. Valier.....	6	5	4	
57	Moise Pouliot.....	42	St. John, Orleans.....	11	9	3	
58	Paul Gobeil.....	44	do	7	5	4	
59	Chas. Alarie Raymond.....	42	Quebec.....	6	5	4	
60	Victor Vézina.....	45	do	7	7	5	
61	Louis Honorius Lachance.....	52	St. Michel, Bellechasse.....	10	12	4	Employed, part of the season, by a collier.
62	L.B.O. Goutron dit Larochelle.....	44	do	13	8	4	Employed, all the season, by the Allan Line of Steamers.
63	Chas. Hermie alias A. Bernier.....	45	do	6	5	5	Master of the Government Steamer "Druid."
64	Louis Robert Deniers.....	44	Quebec.....	0	0	0	
65	Vital Ephrem Chamberland.....	50	Montreal.....	6	7	5	Employed, all the season, by the Allan Line of Steamers.
66	Joseph G. Dupil.....	43	Quebec.....	12	9	3	One of the Directors of the Corporation of Pilots. Re-elected at last election.
67	Jean-Bte. Talbot.....	45	Barthier.....	0	0	0	
68	Joseph Fortier.....	46	St. John, Orleans.....	0	0	0	One of the Directors of the Corporation of Pilots. Re-elected at last election.
69	Nestor Lachance.....	45	do	5	6	4	
70	Cyrille Audet dit Lapointe.....	45	St. Michel, Bellechasse.....	6	5	4	
71	Joseph Lapointe.....	47	St. Laurent, Orleans.....	6	5	5	
72	Pierre Pepin dit Lachance.....	41	Montreal.....	11	11	3	Employed, all the season, by a collier.
73	Théophile Goudreau.....	46	Lauzon, Lévis.....	6	6	5	Employed, part of the season, by the Black Diamond Line of Steamers.
74	Isidore Noël.....	40	St. John, Orleans.....	6	5	5	
75	Jean Evariste Adam.....	46	Trois Saumons.....	6	5	5	
76	Alfred Larochelle.....	40	St. Michel, Bellechasse.....	14	14	3	Employed, all the season, by the Dominion Line of Steamers.

STATEMENT showing the Number of Pilots for and below the Harbour of Quebec, &c.—*Continued.*

Number.	Name.	Age.	Residence.	Number of Pilotages effected.			Casualties and Remarks.
				Inwards.	Outwards.	Movages.	
77	Théophile Corriveau.....	43	Quebec.....	4	5	3	Suspended on the 17th August, for one month. Employed, all the season, by the Hansa Line of Steamers.
78	Elzéar Godbout.....	42	do.....	10	11	3	
79	George Couillard Despres.....	42	Bienville, Lévis.....	6	5	4	
80	Pierre Gobeil.....	42	St. John, Orleans.....	7	4	5	Employed, all the season, by the Black Diamond Line of Steamers.
81	Théodule Pepin dit Lachance.....	45	Montreal.....	10	10	3	
82	Achille Trefflé Simard.....	39	St. Joseph, Lévis.....	6	5	4	
83	Jean-Bte. Fatone.....	39	Bienville, Lévis.....	9	9	3	Master of the SS. "Polino." Absent all the season.
84	Narcisse Lavoie.....	41	St. Luce, Rimouski.....	3	0	0	
85	Joseph Emilio Couillard.....	39	Quebec.....	0	0	0	
86	Louis Albert Royer.....	45	St. John, Orleans.....	11	12	3	Employed, part of the season, by a Collier. Employed, all the season, by the Allan Line of Steamers.
87	Adelard Sansteare.....	40	St. Michel, Bellechasse.....	10	10	3	
88	Ouséine Noël.....	38	St. John, Orleans.....	12	10	3	
89	Napoléon Baillargeon.....	40	St. Pétronille, Orleans.....	5	5	4	Employed, all the season, by the Thomson Line of Steamers.
90	David F. Pelletier.....	38	Lauson, Lévis.....	6	6	5	
91	Frs.-X. Bernier.....	38	Quebec.....	15	19	3	
92	Frs.-X. Demeule.....	38	St. John, Orleans.....	5	7	4	Employed, all the season, by the Donaldson & Ross Line of Steamers.
93	Louis Honoré Lapiere.....	40	Notre Dame, Lévis.....	8	13	3	
94	Joseph Eugene Lachance.....	36	St. John, Orleans.....	0	0	0	
95	David Arthur Bouffard.....	36	St. Laurent, Orleans.....	6	5	4	One of the Directors of the Corporation of Pilots. Not re-elected at last election.
96	Jean Théophile St. Laurent.....	39	Quebec.....	13	8	3	
97	Jacques Georges Dugas.....	38	St. Anne Lapocatière.....	7	4	4	
98	Joseph Victor Gourdeau.....	43	St. Pétronille, Orleans.....	5	6	5	Employed, all the season, by the Allan Line of Steamers.
99	Louis alias Tiefflé Delisle.....	36	Trois Pistoles.....	0	0	0	
100	Jean-Bte. Couillard.....	39	Cap St. Ignace.....	5	5	4	
101	Chas. Pelletier.....	40	Quebec.....	5	6	4	Master of the Red Island Light Ship.
102	Nazaire Delisle.....	44	St. John, Orleans.....	7	8	3	
103	Jos. alias Phileas Langlois.....	41	do.....	6	3	3	
104	J. E. Bonaventure Lavoie.....	38	St. Luce, Rimouski.....	7	4	4	Employed, part of the season, by a Collier. Sick during 25 days.
105	Adjutor Baillargeon.....	36	St. Pétronille, Orleans.....	0	0	0	
106	Samuel Rioux.....	37	Quebec.....	6	6	7	
107	Chs.-Oct. Clavet.....	36	St. Michel, Bellechasse.....	8	8	4	One of the Directors of the Corporation of Pilots. Not re-elected at last election. Elected Director of the Corporation of Pilots at last election.
108	Joseph Dion.....	34	Notre Dame, Lévis.....	5	6	3	
109	Paul Lachance.....	34	Quebec.....	1	0	0	
110	Arcadius Jovuin.....	32	St. Luce, Rimouski.....	6	5	4	Master of the Pilot Schooner No. 5.
111	Léon Labrecque.....	40	St. Laurent, Orleans.....	6	7	4	
112	Paul Lachance.....	35	St. John, Orleans.....	7	7	3	

113	Joseph Pouliot.....	34	do	5	6	4	Employed, all the season, by a Collier.
114	Joseph Larochelle.....	33	St. Michel, Bellechasse.....	10	12	3	Employed, all the season, by the Donaldson & Ross Line of Steamers.
115	Adjutor Lachance.....	32	do	15	17	3	Employed, all the season, by a Collier.
116	Frs. Gaudreau.....	39	Quebec.....	10	11	3	Employed, all the season, by a Collier.
117	Arthur Kenig.....	39	L'Islet.....	6	5	4	Suspended the 2nd of October to the 1st of August, 1891.
118	Eugène Anctil.....	32	St. Jean Port Joli.....	4	3	4	Sick during 18 days.
119	David Dumas.....	37	Notre Dame, Lévis.....	5	4	2	Master of the Pilot Schooner No. 1.
120	Jos. Lachance.....	36	St. Laurent, Orleans.....	2	0	0	
121	Paul Pâquet.....	32	St. John, Orleans.....	5	6	4	
122	Alphonse Pouliot.....	38	do	6	6	5	
123	Elzéar Normand.....	31	L'Islet.....	0	0	0	Suspended, the 26th October, 1889, for 18 calendar months.
124	Jean Bernier.....	31	do	15	15	3	Employed, all the season, by the Donaldson & Ross Line of Steamers.
125	Joseph Pâquet.....	29	St. John, Orleans.....	4	7	4	
126	Jean-A. Lachance.....	28	Quebec.....	5	5	3	
127	Arthur Baillargeon.....	33	St. Pétronille, Orleans.....	5	7	4	
128	Joseph Vézina.....	29	St. Laurent, Orleans.....	6	5	4	
129	Hernégilde Guénard.....	32	St. Thomas, Montmagny.....	7	6	4	
130	Elzéar Desrochers.....	37	Quebec.....	7	4	4	
131	John J.-A. Irvine.....	34	Green Island.....	5	5	4	
132	Fred. Bouffard.....	33	St. Laurent, Orleans.....	6	5	4	
133	Jules Asselin.....	29	St. Michel, Bellechasse.....	5	6	4	
134	Prudent Marmen.....	31	Beauport.....	5	5	4	
135	Lucien Lachance.....	29	St. John, Orleans.....	5	5	5	
136	Alfred Dion.....	32	Green Island.....	7	8	4	Employed, part of the season, by the Black Diamond Line of Steamers.
137	Camille Bernier.....	32	St. Michel, Bellechasse.....	11	12	4	Employed, all the season, by the Dominion Line of Steamers. Tried
138	Moïse Blouin.....	39	St. John, Orleans.....	5	6	4	the 15th and 21st of November. Acquitted.
139	Moïse alias Laurent Godbout	30	Quebec.....	5	9	4	
140	Alfred Godreau.....	37	Cap St. Ignace.....	8	5	4	
141	Alfred Raymond.....	29	Kamouraska.....	5	6	4	
142	Philéas Lachance.....	32	St. John, Orleans.....	5	5	4	
143	Joseph H. Talbot.....	28	Berthier.....	5	6	5	
144	Moïse Arthur Lachance.....	27	St. John, Orleans.....	5	6	4	
145	Louis Frs. Thivierge.....	24	do	7	7	4	
146	Laurent Larochelle.....	30	St. Michel, Bellechasse.....	0	0	0	Suspended, 30th of May to the 1st of June, 1891.
147	François alias J. N. Dallaire.	29	St. Laurent, Orleans.....	6	6	4	
148	Joseph Emilien alias Emile Lachance.....	24	St. John, Orleans.....	6	5	4	
149	Alphonse Asselin.....	25	St. Michel, Bellechasse.....	6	5	4	
150	Edmond Larochelle.....	24	do	11	9	5	
151	Joseph Plante.....	24	St. Paul's Bay.....	6	6	4	
152	Alphonse Pâquet.....	24	St. John, Orleans.....	5	5	4	
153	Paul alias Napoléon Pouliot.	31	do	5	6	4	
154	Arthur Doiron.....	34	St. Joseph, Lévis.....	5	6	5	
155	Adélaïde Bernier.....	29	Quebec.....	8	6	4	

Certified,

JAS. WOODS,
Acting Secretary-Treasurer.

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, 2nd January, 1891.

QUEBEC HARBOUR COMMISSION.

MEMORANDUM REGARDING THE OPENING AND CLOSING OF NAVIGATION AND THE FORMATION OF THE ICE IN THE HARBOUR OF QUEBEC, FOR THE YEAR 1890.

Schooner "Salmon Queen," with firewood from Malbaie, arrived in port on the 3rd April.

The ice bridge between Quebec and the Island of Orleans broke up on the 24th April.

The Tidal Basin was free of ice the 17th April, and the Wet Dock on 23rd April.

The River St. Charles ice broke up and cleared the 23rd April.

Steamboat "Montreal," of the Richelieu and Ontario line, arrived in port the 29th April.

The first two ocean steamers "Oregon" and "Sardinian" arrived in port the 29th April.

The first sailing ship, bark "Magdalene," arrived in port 9th May.

The last sailing vessel bark "Aljuca," left port the 20th November.

The last ocean steamer, SS. "Brazillian," left port the 25th November.

The SS. "Newfoundland," from Halifax, N.S., arrived in port on the 28th November.

The ice formed in the Wet Dock on the 29th November.

On the 1st December the Tidal Basin and River St. Charles were frozen over.

The ice bridge formed the 5th December between the Island of Orleans and the north shore.

JAMES WOODS,
Acting Secy.-Treasurer.

HARBOUR COMMISSIONERS OFFICE,
QUEBEC, 2nd January, 1891.

APPENDIX No. 4.

REPORT OF THE PILOTAGE AUTHORITY OF ST. JOHN, N.B., FOR THE YEAR ENDED 31ST DECEMBER, 1890.

OFFICE OF THE PILOTAGE AUTHORITY,
DISTRICT OF ST. JOHN, N.B., 6th January, 1891.

SIR,—Herewith enclosed please find our annual returns of pilotage for this district for the year ending the 31st December, 1890.

I have the honour to be, Sir,
Your obedient servant,

J. U. THOMAS,
Secretary.

RECEIPTS and Expenditures for the Year ending 31st December, 1890.

	Amount.	Total.
	\$ cts.	\$ cts.
RECEIPTS.		
Licenses to 34 pilots, at \$5.....	170 00	
Arrears.....	5 00	
Licenses to 6 pilot boats, at \$10.....	60 00	
25 cents per foot on outward pilotage from port of St. John.....	2,225 86	
25 cents per foot on outward pilotage from port of Musquash.....	32 75	
Interest on Dominion Savings Bank deposits, 12 months, to 31st July, 1890....	255 89	2,749 50
EXPENDITURES.		
Pensions to 2 pilots.....	280 00	
do 6 widows.....	512 00	
do 2 children.....	40 00	
J. A. McMillan, stationery, &c.....	13 50	
Auditing accounts for 1889.....	25 00	
Office rent, 1 year.....	100 00	
Salary Secretary-Treasurer, 1 year.....	800 00	
Interest on deposit in Dominion Savings Bank.....	255 89	
By balance.....		2,026 39
Total.....		723 11
		2,749 50

RETURNS of Vessels arriving at the Port of St. John, subject to Pilotage, for the
Year ending 31st December, 1890.

Description.	Number.	Total.
		\$ cts.
Schooner	403	
Brigs and brigantines	64	
Ships	24	
Barks and barkentines.....	150	
Steamers.....	38	
	679	
Amount of pilotage received.....		27,040 23
<i>British.</i>		
Schooners	127	
Brigs and brigantines.....	44	
Ships	18	
Barks and barkentines.....	111	
Steamers.....	29	
	329	
Amount of pilotage received		15,576 02
<i>Foreign.</i>		
Schooners	276	
Brigs and brigantines.....	20	
Ships.....	6	
Barks and barkentines.....	39	
Steamers.....	9	
	350	
Amount of pilotage received.. ..		11,464 21

J. U. THOMAS,
Secy.-Treasurer.

RATES of Pilotage in force 31st December, 1890, for the Pilotage District of St. John
ON ALL SAILING VESSELS.

Inward—1st District.....	\$1 50 per foot draught of water.
2nd do	1 75 do do
3rd do	2 25 do do
Outward—To Partridge Island.....	1 25 per foot.
Down the Bay (not compulsory)	2 00 do
Transporting—100 tons and under.....	\$1 50
Over 100 do 200 tons.....	2 00
do 200 do 300 do	3 00
do 300 do 400 do	4 00
And 25 cents additional for every fifty tons such vessel shall measure over 400 tons.	

ON ALL STEAMERS.

Inward—1st District.....	\$2 00 per foot draught of water.
2nd do	2 50 do do
3rd do	3 00 do do
Outward—To Partridge Island.....	1 75 per foot.
Down the Bay (not compulsory).....	2 75 do
Transporting—100 tons and under.....	\$2 00
Over 100 do 200 tons.....	2 50
do 200 do 300 do	3 75
do 300 do 400 do	5 00
And 30 cents additional for every fifty tons such steamers shall measure over 400 tons.	

J. U. THOMAS,
Secy.-Treasurer.

PILOTS Licensed for the Pilotage District of St. John for the Year 1890.

Name.	Age.	Residence.	Remarks.
Patrick Traynor.....	64	St. John, N.B.....	
Thomas Traynor.....	37	do	
Samuel Rutherford.....	58	do	
Edward J. Fletcher.....	63	do	
Joseph Doherty.....	44	do	
John L. C. Sherrard.....	56	do	
James Doyle.....	54	do	
Henry Spears.....	39	do	
John Thomas.....	42	do	
James Murray.....	49	do	
Henry Thomas.....	59	do	
John Sproul.....	54	do	
Richard Scott.....	39	do	
Patrick Conlin.....	40	do	
James Reed.....	44	do	
John Spears.....	41	do	
Charles Daley.....	54	do	
William Lahey.....	61	do	
Richard Cline.....	65	do	
James McPartland.....	56	do	
James S. Spears.....	45	do	
Thos. J. Stone.....	37	do	
James E. Mantle.....	44	do	
William Quinn.....	43	do	
Philip G. Doody.....	50	do	
Daniel Mulherrin.....	64	do	
William Miller.....	39	do	
Alfred Cline.....	33	do	
William Scott.....	34	do	
Bartholomew Rogers.....	33	do	
James Bennett.....	33	do	
Martin Spears.....	33	do	
Robert Thomas.....	49	do	
John McAnulty.....	51	Musquash, N.B.....	Licensed for Musquash only.

APPENDIX No. 5.

REPORT OF THE PILOTAGE AUTHORITY FOR THE DISTRICT OF
MIRAMICHI, N.B., FOR THE YEAR ENDED 31st DECEMBER, 1890.

OFFICE OF PILOT COMMISSIONERS,

NEWCASTLE, MIRAMICHI, N.B., 27th December, 1890.

SIR,—I have the honour to enclose herewith the Pilotage Returns for the Miramichi District for the year 1890.

I have the honour to be, Sir,

Your obedient servant,

R. R. CALL, *Secretary Treasurer.*

WILLIAM SMITH, Esq.,

Deputy Minister of Marine, Ottawa.

MIRAMICHI Pilots in Account with R. R. Call, Secretary-Treasurer.

1890.	Dr.	\$ cts.
June 3..	To paid Gillespie & Sadler's account, repairs schooner "Empress".....	20 78
do 18..	Geo. Watt's account, repairs schooner "Princess Louise".....	7 15
July 18..	James Henderson, surveying 4 pilot schooners.....	10 00
Aug. 11..	Wm. Tait, pilot master, account expenses.....	6 00
Oct. 18..	T. F. Gillespie, premium of insurance on seine.....	6 75
do 18..	Rent of pilot master's office.....	20 00
do 18..	Lawyer R. A. Lawlor, fee, captain of "Europa" vs. Pilots.....	10 60
do 18..	Pilot Hanlan's travelling expenses to Prince Edward Island.....	7 30
Nov. 3..	Wm. Tait, pilot master, account expenses.....	6 00
do 3..	Interest on money borrowed to pay for seine.....	25 20
do 18..	Rent of store for seine and fishing gear.....	10 00
do 18..	H. A. Muirhead & Co's. account, repairs schooners.....	2 24
do 18..	Montreal Steam Navigation Co., steamboat fares, pilots.....	11 40
do 18..	W. C. Huston's account, printing.....	3 00
do 18..	2 pilots on account seine.....	2 80
do 18..	Pilot Alex. Martin, pension.....	100 00
do 29..	3 per cent. commission on \$12,729.15.....	381 87
do 29..	27 pilots, \$404.76 each; 2 do \$494.86 each; 1 do \$359.82.....	12,048 06
		12,729 15
	Cr.	
Nov. 29..	By amount collected pilotage, inwards.....\$	5,213 35
do 29..	do do outwards.....	6,120 00
do 29..	do do removals.....	818 50
do 29..	do do extra services.....	135 80
do 29..	do earned by pilots outside pilotage.....	441 50
		12,729 15

R. R. CALL, *Secretary-Treasurer.*

RATES of Pilotage chargeable at Miramichi, N.B., on all Vessels, British and Foreign.

	\$ cts.
When inward bound.....	2 25 per foot.
And for all vessels propelled wholly or in part by steam, in addition to the above.....	0 02 per ton.
When outward bound.....	2 00 per foot.
For every vessel taken to sea after the first day of November a bonus of.....	4 00
For the Removal and Mooring of Vessels.....	
Not exceeding 100 tons.....	1 50
do 200 do.....	2 00
do 300 do.....	3 00
Exceeding 300 tons.....	4 00
And where the distance of removal exceeds 4 miles 50 per cent. to be added to the above rates.	

PILOTAGE RETURNS for the Pilotage District of Miramichi, N. B., for the
Year ending 31st December, 1890.—*Continued.*

Class of Vessel.	Number.	Number.
Vessels Reported Inwards—		
British steamers	5	
do sailing vessels	62	
Foreign steamers	1	
do sailing vessels	124	192
Vessels Reported Outwards—		
British steamers	5	
do sailing vessels	56	
Foreign steamers	1	
do sailing vessels	124	186
Vessels Removed—		
British steamers	2	
do sailing vessels	15	
Foreign steamers	1	
do sailing vessels	89	107
Vessels, Extra Services—		
British steamers		
do sailing vessels	5	
Foreign steamers		
do sailing vessels	7	12
	\$ cts.	\$ cts.
Total Amount Pilotage Inwards—		
British steamers	224 66	
do sailing vessels	1,493 25	
Foreign steamers	53 34	
do sailing vessels	3,442 10	5,213 35
Total Amount of Pilotage Outwards—		
British steamers	168 00	
do sailing vessels	1,696 50	
Foreign steamers	41 00	
do sailing vessels	4,214 50	6,120 00
Total Amount of Removals—		
British steamers	14 00	
do sailing vessels	182 00	
Foreign steamers	4 00	
do sailing vessels	618 50	818 50
Total Amount for Extra Services—		
British steamers		
do sailing vessels	79 30	
Foreign steamers		
do sailing vessels	56 50	135 80

NATIONALITIES of Vessels Piloted Inwards for the Year, 1890.

Nationality.	Number.	Nationality.	Number.
British.....	67	French.....	3
Norwegian.....	77	American.....	1
Italian.....	23	Danish.....	1
Russian.....	5	Netherlands.....	1
Austrian.....	6	Portuguese.....	1
Swedish.....	4	Total.....	192
German.....	3		

LIST of Pilot Boats Licensed.

No.	Names of Boats.	Tonnage.	Captains.	When First Licensed.	When Last Licensed.
11	May Queen.....	22·50	Angus McLean.....	May, 1878.....	May, 1890.
13	Two Brothers.....	25	James McCullam.....	do 1878.....	do 1890.
14	Empress.....	25·57	George Savoy.....	do 1878.....	do 1890.
15	Princess Louise.....	20·85	Robert J. Walls.....	do 1879.....	do 1890.

PILOTAGE Returns for the Pilotage District of Miramichi, N.B., for the Year ended 31st December, 1890.

No.	Name of Pilots.	Age.	For what Service.	Remarks.
2	Louis Jimmo	36	Full license.....	
4	Angus McEachran.....	71	do	
5	Mitchell, Martin	61	do	
6	Francis Martin.....	56	do	
7	Maxime Martin.....	45	do	
9	Angus McLean.....	57	do	
10	Alexander Wilson.....	44	do	
11	Robert J. Walls	39	do	
12	George Savoy.....	46	do	
13	Reuben Nowlan.....	46	do	
14	John McEachran.....	40	do	
15	Charles McLean.....	51	do	
20	Oliver Foster.....	49	do	
22	William Walls.....	36	do	
23	William Tait.....	67	Pilot Master.....	
24	Allan McEachran, sen.....	56	Full license.....	Died Sept., 1890.
26	John McCullam	38	do	
27	James Nowlan.....	39	do	
28	Dudley P. Walls.....	44	do	
29	George Sutton.....	39	do	
30	James A. Nowlan.....	35	do	
31	George T. Tait.....	33	do	
32	Joseph Jimmo.....	35	do	
33	James McCullam.....	46	do	
34	Allan McEachran, jun.....	31	do	
35	John Martin.....	31	do	
36	Asa Walls.....	31	do	
37	William Walls, jun.....	33	do	
38	John Nowlan.....	34	do	
39	Patrick Nowlan.....	31	do	

APPENDIX No. 6.

REPORT OF THE PILOTAGE AUTHORITY OF BATHURST, N.B., FOR
THE CALENDAR YEAR ENDED 31st DECEMBER, 1890.

STATEMENT showing number of Vessels brought from and taken to Sea, and amount
of Fees collected, Season of 1890.

Names of Pilots.	Foreign Vessels, Inwards.		Foreign Vessels, Outwards.		British Vessels, Inwards.		British Vessels, Outwards.		Total Vessels.	Total Fees.
	No.	Fees.	No.	Fees.	No.	Fees.	No.	Fees.		
		\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
Timothy Daly	20	301 60	20	359 00	5	58 80	5	66 00	25	785 40
Fred. Ronalds.....										
Wm. H. Daly.										
Fabien Hachey.....										
Nazare Hachey.....										

EDWARD HICKSON,
Secretary.

BATHURST, N.B., 31st December, 1890.

APPENDIX No. 7.

PILOTAGE RETURNS FOR THE PILOTAGE DISTRICT OF THE COUNTY OF CHARLOTTE, N.B., FOR THE YEAR ENDED 31ST DECEMBER, 1890.

St. ANDREW'S, N.B., 31st December, 1890.

SIR,—Annexed I hand you herewith pilotage returns for the district of the County of Charlotte, N.B., for the year ending 31st December, inst.

I have the honour to be, Sir,

Your obedient servant,

C. E. O. HATHEWAY,

Commissioner and Secretary.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

PILOTAGE RETURNS for the District of the County of Charlotte, N.B., for the Year ended 31st December, 1890.

Pilots Licensed.	Residence.	District Licensed for.
Joseph Boyd	Parish of Campobello.....	County of Charlotte.
John Boyd	do Dufferin	do
Wellington Cline.	do West Isles.....	do
Patrick Britt.....	do St. Andrews.....	do

Pilot Boats Licensed.

Pilot boat "Frederick Taylor," 12½ tons, Joseph Boydmaster.

AMOUNT of Pilotage collected by Pilots for current year.

Names of Pilots.	British Vessels.	Foreign Vessels.	Total.
	\$ cts.	\$ cts.	\$ cts.
Joseph Boyd	336 40	275 85	
John Boyd	306 30	140 20	
Wellington Cline	33 50	280 00	
Patrick Britt (not acting)			
	676 20	696 02	1,372 25

Receipts by Pilotage Authority.

License for one pilot boat.....	\$ 5 00	
do three pilots.....	10 00	
Regulations	3 00	
		<u>\$26 00</u>

Charges.

Printing blank regulations, &c.....	\$ 5 00	
Stationery and postage.....	0 75	
Paid Commissioners, St. Stephen's and St. George.....	6 00	
do Commissioner and Secretary, St. Andrew's.....	14 25	
		<u>\$26 00</u>

Rates of Pilotage in the District.

Longest Pilotage District, inwards or outwards, \$2.25 per foot draft of water.

Second do do 1.60 do

Third do do 1.50 do

From or to Campo Bello 20c. per foot less than above rates.

Fourth Pilotage District, inwards or outwards, \$1 per foot draft of water.

From 1st of November to 1st of April, 20c. per foot in addition to above rates.

To or from St. Andrew's harbour to ballast ground, vessels 80 tons and under 300 tons, \$2.50 each; vessels 300 tons and upwards, \$3 each.

Removing a vessel from one loading place or harbour to any other inside St. Andrew's Bay. Vessels 80 tons up to 200 tons, \$4; over 200 tons and up to 300 tons, \$5; over 300 tons and up to 400 tons, \$6; exceeding 400 tons, \$8 each.

Removing vessels from any loading place inside St. Andrew's Bay to any harbour or loading place outside St. Andrew's Bay, and within the county: pilotage, inward or outward. Vessels 80 tons and under 200 tons, \$6 each; 200 tons and under 300 tons, \$8 each; 300 tons and under 400 tons, \$10 each; 400 tons and upwards, \$12 each.

C. E. O. HATHEWAY,
Acting Secretary.

ST. ANDREW'S, N.B., 31st December, 1890.

APPENDIX No. 8.

REPORT OF THE HALIFAX PILOTAGE COMMISSIONERS, FOR THE
CALENDAR YEAR ENDED 31ST DECEMBER, 1891.

HALIFAX, N.S., 24th January, 1890.

DEAR SIR,—I beg leave to forward for the information of the Department the annual returns of the Pilotage Authority of the District of Halifax, N.S., viz.:—
Statement of Receipts and Expenditure.
Statement of Superannuation Fund.
Statement of Net Receipts of Pilots.
Return of Vessels entered Inwards, British and Foreign.
Return of Vessels entered Outwards, British and Foreign.
List of Licensed Pilots.

Respectfully, &c., &c.,
Your obedient servant,
J. TAYLOR WOOD,
Secretary-Treasurer.

STATEMENT of Superannuation Fund.

	\$	cts.
By Cash, Savings Bank, 1st January, 1890.....	3,347	33
Cash, special deposit, Union Bank, January, 1890.....	400	20
Cash, Union Bank, 1st January, 1890.....	189	20
Cash, 2 per cent collected during 1890.....	524	13
Interest, Savings Bank and Union Bank.....	136	33
	4,596	96
Less—Paid family late Pilot Smith.....	\$45	00
do do Nickerson.....	45	00
	90	00
	4,506	99
By Balance, Savings Bank.....	3,468	66
Balance, Union do (special deposit).....	915	00
do do do.....	123	33
	4,506	99
Increase for the year.....	570	46

E and O. E.

NET Earnings of Pilots for 1890.

Number of Pilot Boats.		Net Earnings.	Number of Men.	Net Earnings per Man.	
		\$	cts.	\$	cts.
No. 1, Pilot Boat	"Cambridge".....	5,519	10	7	788 44
2 do	"Mic Mac".....	5,234	20	6	872 38
3 do	"Genesta".....	5,225	81	6	870 97
4 do	"Annie Gaetz" (5 months).....	2,219	15	6	369 86
Total net earnings for 1890.....		18,198	26	25	727 93

E. and O. E.

J. TAYLOR WOOD,
Secretary-Treasurer.

RETURN of Vessels entered Inward at the Port of Halifax, N.S., from January 1 to December 31, 1890, subject to compulsory pilotage dues.

BRITISH.

Schooner.	Brigantine.	Brig.	Barque.	Ship.	Steamer.	Tonnage.	Amount of Pilotage Dues.
206	222	.....	.....	6	378	575,184	\$ cts. 11,213 99

FOREIGN.

31	5	3	55	1	85	88,559	1,848 15
237	227	3	55	7	463	663,743	13,062 14

RETURN of Vessels entered Outwards at the Port of Halifax, N.S., from January 1 to December 31, 1890, subject to compulsory pilotage dues.

BRITISH.

Schooner.	Brigantine.	Brig.	Barque.	Ship.	Steamer.	Tonnage.	Amount of Pilotage Dues.
7	14	3	33	6	389	609,064	\$ cts. 5,336 61

FOREIGN.

5	1	3	42	.....	80	103,826	1,229 80
12	15	6	75	6	469	712,890	6,566 41

J. TAYLOR WOOD,

Secretary and Treasurer.

STATEMENT of Receipts and Expenditure for Year ending 1890.

EXPENDITURE.		\$ cts.
To Necessary expense attending meetings and investigations, 1889	510 00	
Auditor for 1889	30 00	
Secretary's salary	600 00	
Office rent, fuel and taxes	338 34	
Expenses visiting pilot stations	47 66	
Paid Mrs. Murphy	25 00	
Printing, stationery and sundries	164 87	
Surplus at Cr. of Pilotage Fund	3,932 15	
	5,648 02	
RECEIPTS.		
By Cash on hand, January 1, 1890	894 28	
Dominion 4 per cent. stock	1,000 00	
Deposit Savings Bank	1,717 99	
Outward pilotage (on vessels having no pilots)	950 27	
5 per cent. commission of pilotage collected	983 24	
Interest on 4 per cent. stock and amount in savings bank	102 24	
	5,648 02	
By Surplus at Cr. of Pilotage Fund	3,932 15	

J. TAYLOR WOOD,

Secretary and Treasurer.

HALIFAX, December 31, 1890.

LIST of Pilots for the Port of Halifax, N.S.

No.	Name.	Residence.
1	John Fleming.....	Ketch Harbour.
2	Wm. Fleming..	do
3	James Holland.....	Duncan's Cove.
4	William Baker.....	Halifax.
5	Bernard Gallagher.....	do
6	Daniel Martin.....	Ketch Harbour.
7	Joseph Reno.....	Herring Cove.
8	Patrick Hayes.....	do
9	Hugh Munro.....	do
10	Jeremiah Holland.....	Duncan's Cove.
11	Edward Bayers.....	Halifax.
12	James Hanrahan.....	Ferguson's Cove.
13	William Beazley.....	do
14	John Hayes.....	Halifax.
15	James Spears.....	Ketch Harbour.
16	John Beazley.....	Halifax.
17	Charles Glazebrook.....	do
18	Chas. F. Martin.....	Ketch Harbour.
19	William White.....	Ferguson's Cove.
20	Thomas Hayes.....	Herring Cove.
21	T. Reno.....	do
22	Charles Martin.....	Sambro.
23	Henry Latter.....	Herring Cove.
24	John Johnson.....	Bear Cove.
25	James Conway.....	Ferguson's Cove.
26	James Flemming.....	Ketch Harbour.

J. TAYLOR WOOD,
Secretary and Treasurer.

HALIFAX, N.S., January, 1891.

APPENDIX No. 9.

REPORT OF THE PILOTAGE AUTHORITY FOR DISTRICT OF GLACE
BAY, C. B., FOR THE CALENDAR YEAR ENDED 31st DECEMBER, 1890.

GLACE BAY, C. B., 9th February, 1891.

SIR,—Herewith I beg to forward accounts from this pilotage district for year ended 31st December last.

I have the honour to be, Sir,

Your obedient servant,

CHAS. H. RIGBY,

Secretary Board of Pilots.

The Honourable
The Minister of Marine,
Ottawa.

PILOTAGE Collected, Glace Bay District, Year ended 31st December, 1890.

Date.	Tonnage.	Nationality.	Vessel.	Pilotage.	Pilot.
1890.				\$ cts.	
May 2.	226	British.....	Steamship Nimrod.....	16 00	J. Shanahan.
do 5.	81	do	Schooner Charles Tupper	10 00	J. Farrell.
do 5.	90	do	do Annie Rory.....	5 00	E. Petrie.
do 6.	244	do	Brigantine Zanoni.....	16 00	A. McLellan.
do 8.	99	do	Schooner S. A. Morash	7 50	J. Ryan.
do 8.	102	do	do Warrior.....	9 00	J. Shanahan.
do 8.	91	do	do Thetis.....	7 50	A. McPherson.
do 9.	1,142	do	Steamship Aline.....	52 00	T. Ling.
do 9.	190	do	do Kite.....	14 00	J. Shanahan.
do 9.	94	do	Schooner Laura.....	5 00	J. Farrell.
do 9.	95	do	do Germ.....	7 50	E. Petrie.
do 12.	94	do	do Hattie C.....	5 00	A. McLellan.
do 13.	88	do	do Victory.....	5 00	J. Ryan.
do 13.	90	do	do Laura B.....	5 00	A. McPherson.
do 13.	871	do	Steamship Grandholm.....	42 00	E. Petrie.
do 14.	85	do	Schooner Brilliant.....	5 00	T. Ling.
do 14.	136	do	do Kesiah.....	6 00	J. Shanahan.
do 14.	272	do	do Walter Holly.....	13 50	J. Farrell.
do 14.	226	do	Steamship Nimrod.....	16 00	E. Petrie.
do 15.	106	do	Schooner Pioneer.....	9 00	A. McLellan.
do 15.	98	do	do Diamond.....	7 50	J. Ryan.
do 16.	113	do	Barkentine A. M. Brundrit.....	9 00	J. Shanahan.
do 16.	87	do	Schooner Lucretia Jane.....	5 00	A. McPherson.
do 17.	115	do	do Florence Abbott.....	3 00	J. Ryan.
do 20.	96	do	do Spring Bird.....	2 50	E. Petrie.
do 20.	1,094	do	Steamship Marmion.....	50 00	J. Shanahan.
do 20.	986	do	do Western Star.....	46 00	J. Farrell.
do 22.	1,255	do	do Rydal Holm.....	58 00	A. McLellan.
do 23.	1,086	do	do Oakdene.....	50 00	J. Ryan.
do 24.	172	do	Brigantine Edith.....	14 00	T. Ling.
do 26.	128	do	Schooner Leader.....	9 00	A. McPherson.
do 26.	90	do	do Annie Roy.....	2 50	E. Petrie.
do 27.	1,117	do	Steamship George Clarkson.....	52 00	J. Shanahan.
do 29.	953	do	do Tudor Prince.....	46 00	T. Ling.
do 29.	871	do	do Grandholm.....	42 00	J. Farrell.
do 30.	287	do	Bark Caspasian.....	18 00	J. Ryan.
do 30.	113	do	Schooner Thistle.....	9 00	A. McPherson.
do 30.	930	do	Steamship Cacouna.....	44 00	A. McLellan.
do 21.	930	do	do Marmion.....	50 00	E. Petrie.
June 2.	1,094	do	Schooner Jeannie.....	5 00	A. McPherson.
do 2.	98	do	Steamship Kite.....	14 00	E. Petrie.
do 3.	190	do	do Western Star.....	46 00	J. Farrell.
do 4.	986	do	do Oakdene.....	50 00	T. Ling.
do 5.	1,086	do	Schooner Alice.....	6 00	J. Shanahan.
do 5.	115	do	Steamship Coban.....	34 00	A. McLellan.
do 6.	688	do	do Falcon.....	20 00	J. Ryan.
do 7.	311	do	do Grandholm.....	42 00	E. Petrie.
do 10.	871	do	Schooner Moss Glen.....	12 00	T. Ling.
do 11.	149	do	Steamship Kite.....	14 00	J. Shanahan.
do 11.	190	do	Schooner Blanche.....	10 50	J. Ryan.
do 11.	195	do	do Pleroma.....	9 00	J. Farrell.
do 11.	148	do	Brigantine Venturer.....	15 00	A. McLellan.
do 12.	338	do	Steamship George Clarkson.....	52 00	E. Petrie.
do 13.	1,117	do	Brigantine Grace Butler.....	12 00	J. Ryan.
do 13.	149	do	Bark Rosina.....	10 50	J. Farrell.
do 14.	185	do	Steamship Marmion.....	50 00	T. Ling.
do 14.	1,094	do	Schooner, Spring Bird.....	2 50	A. McPherson.
do 16.	96	do	Steamship Tudor Prince.....	46 00	J. Ryan.
do 17.	953	do	do Oakdene.....	50 00	J. Farrell.
do 20.	1,086	do	Barkentine Auriola.....	18 00	E. Petrie.
do 21.	250	do	Brigantine Zanoni.....	16 00	A. McLellan.
do 21.	244	do	Steamship Aline.....	52 00	J. Farrell.
do 24.	1,142	do	do George Clarkson.....	52 00	E. Petrie.
do 25.	1,117	do	Schooner Vigilante.....	6 00	A. McPherson.
do 25.	114	do	Brigantine New Dominion.....	9 00	J. Ryan.
do 25.	144	do			

PILOTAGE Collected, Glace Bay District, Year ended 31st December, 1890—*Con.*

Date.	Tonnage.	Nationality.	Vessel.	Pilotage.	Pilot.
				\$ cts.	
June 25.	154	British.	Schooner Marie Elmiere	7 00	A. McLellan.
do 26.	871	do	Steamship Grandholm.	42 00	T. Ling.
do 26.	112	do	Schooner Minnie E. Moody	9 00	J. Shanahan.
do 26.	98	do	do Utopia.	5 00	E. Petrie.
do 27.	94	do	do Sarah Elizabeth	5 00	A. McPherson.
do 27.	190	do	Steamship Kite	14 00	T. Ling.
do 27.	211	do	Bark Dora.	12 00	J. Shanahan.
do 28.	1,094	do	Steamship Marmion	50 00	J. Farrell.
do 28.	311	do	do Falcon	20 00	J. Ryan.
July 1.	1,086	do	Steamship Oakdene.	50 00	A. McLellan.
do 1.	107	do	Schooner Aubrey A.	6 00	J. Ryan.
do 2.	98	do	do Weaver Belle	10 00	E. Petrie.
do 3.	94	do	do Rose Mary.	10 00	J. Shanahan.
do 3.	429	do	Barkentine Fredericka.	24 00	J. Farrell.
do 3.	292	do	Brigantine Gertrude.	18 00	T. Ling.
do 4.	110	do	Schooner Marie Erzelle.	6 00	A. McPherson.
do 7.	190	do	Steamship Kite	14 00	A. McLellan.
do 7.	836	do	do Bona Vista	40 00	J. Farrell.
do 7.	311	do	do Falcon	18 00	J. Ryan.
do 9.	1,117	do	do George Clarkson	52 00	E. Petrie.
do 9.	871	do	do Grandholm	42 00	J. Shanahan.
do 10.	65	do	Schooner Triumph.	4 00	A. McPherson.
do 10.	130	do	Steamship William	9 00	T. Ling.
do 11.	99	do	Schooner Mellacoree.	5 00	E. Petrie.
do 11.	1,094	do	Steamship Marmion.	50 00	J. Ryan.
do 11.	860	do	do River Garry.	42 00	E. Petrie.
do 11.	99	do	Schooner Lochiel	7 50	J. Ryan.
do 12.	96	do	do Ceylon.	7 50	A. McLellan.
do 15.	125	do	do St. Ann.	6 00	E. Petrie.
do 15.	986	do	Steamship Western Star.	46 00	J. Farrell.
do 15.	1,086	do	do Oakdene.	50 00	T. Ling.
do 16.	98	do	Schooner Mary Eleanor.	5 00	J. Ryan.
do 16.	186	do	Bark Dunure.	14 00	E. Petrie.
do 17.	244	do	Brigantine Zanoni.	16 00	J. Shanahan.
do 17.	250	do	Bark Aureola	18 00	A. McLellan.
do 18.	89	do	Schooner Sarah F.	7 50	A. McPherson.
do 18.	94	do	do Sarah Elizabeth.	5 00	J. Farrell.
do 18.	157	do	do Bella Rosa.	14 00	T. Ling.
do 19.	1,117	do	Steamship George Clarkson.	52 00	A. McLellan.
do 22.	871	do	do Grandholm	42 00	E. Petrie.
do 22.	132	do	Schooner Vesper.	6 00	A. McPherson.
do 23.	347	American.	do Sadie Witcutt.	20 00	J. Ryan.
do 24.	1,095	British.	Steamship Marmion.	50 00	J. Farrell.
do 25.	90	do	do Hercules.	7 50	J. Ryan.
do 26.	860	do	do River Garry.	42 00	E. Petrie.
do 26.	1,142	do	do Aline.	52 00	A. McLellan.
do 28.	81	do	Schooner Charley Tupper	7 50	T. Ling.
do 28.	99	do	do Bessie A.	5 00	A. McPherson.
do 28.	1,086	do	Steamship Oakdene.	50 00	J. Ryan.
do 29.	140	do	Schooner Bonnie Belle.	6 00	E. Petrie.
do 30.	986	do	Steamship Western Star.	46 00	J. Farrell.
do 31.	181	do	Barkentine Viola	10 50	A. McLellan.
do 31.	1,117	do	Steamship George Clarkson.	52 00	T. Ling.
do 31.	99	do	Schooner Mellacoree.	5 00	A. McPherson.
do 31.	99	do	do Susie E.	5 00	J. Shanahan.
Aug. 1.	91	do	do Thetis	5 00	J. Farrell.
do 1.	190	do	Steamship Kite.	14 00	J. Ryan.
do 1.	159	do	Schooner Rose Bud.	10 50	J. Ryan.
do 2.	94	do	do Rose Mary.	10 00	A. McPherson.
do 4.	1,094	do	Steamship Marmion	50 00	S. Petrie.
do 5.	149	do	Brigantine Aquilla.	9 00	A. McLellan.
do 5.	871	do	Steamship Grandholm	42 00	J. Shanahan.
do 6.	638	do	Barkentine Ashlow	32 00	J. Farrell.
do 6.	130	do	Steamship William	9 00	T. Ling.
do 6.	90	do	do Hercules.	7 50	E. Petrie.

PILOTAGE Collected, Glace Bay District, Year ended 31st December, 1890—*Con.*

Date.	Tonnage.	Nationality.	Vessel.	Pilotage.	Pilot.
1890.				\$ cts.	
Aug. 6.	144	British.	Brigantine New Dominion.	6 00	A. McPherson.
do 7.	244	do	do Zanoni.	16 00	J. Ryan.
do 7.	111	do	Schooner Helena Maud.	9 00	J. Farrell.
do 7.	148	do	Brigantine Alaska.	3 00	A. McPherson.
do 9.	1,086	do	Steamship Oakdene.	50 00	E. Petrie.
do 11.	343	do	do Eagle.	20 00	A. McLellan.
do 11.	1,142	do	do Aline.	52 00	J. Shanahan.
do 12.	147	do	Schooner North America.	6 00	T. Ling.
do 15.	986	do	Steamship Western Star.	46 00	E. Petrie.
do 15.	113	do	Schooner Thistle.	3 00	A. McPherson.
do 15.	1,117	do	Steamship George Clarkson.	52 00	J. Shanahan.
do 15.	1,094	do	do Marmion.	50 00	J. Farrell.
do 19.	718	do	do Ardenbohn.	36 00	J. Ryan.
do 20.	871	do	do Grandholm.	42 00	T. Ling.
do 21.	515	Norwegian.	Barkentine T. B. Olsen.	28 00	A. McLellan.
do 21.	1,086	British.	Steamship Oakdene.	50 00	E. Petrie.
do 22.	769	do	Barkentine Lepreaux.	38 00	T. Ling.
do 23.	1,186	do	Steamship Horton.	54 00	A. McPherson.
do 25.	290	do	Schooner M. A. Nutter.	9 00	A. McPherson.
do 25.	345	do	Barkentine Paregero.	20 00	E. Petrie.
do 27.	1,117	do	Steamship George Clarkson.	52 00	J. Ryan.
do 27.	231	do	Barkentine Lady Elibank.	8 00	T. Ling.
do 29.	986	do	Steamship Western Star.	46 00	J. Farrell.
do 30.	168	do	Schooner Alta.	3 50	A. McPherson.
do 30.	74	do	Steamship F. Olof.	8 00	J. Ryan.
Sept. 1.	126	do	Schooner Ocean Star.	6 00	J. Shanahan.
do 4.	296	do	do M. L. Bonnell.	13 50	E. Petrie.
do 4.	1,086	do	Steamship Oakdene.	50 00	J. Farrell.
do 4.	871	do	do Grandholm.	42 00	T. Ling.
do 5.	657	do	Barkentine Conning.	17 00	E. Petrie.
do 6.	317	do	do Arthur N. Gibson.	15 00	J. Farrell.
do 6.	161	do	Steamship Coila.	10 50	J. Ryan.
do 6.	123	do	Schooner Osceola.	6 00	A. McPherson.
do 6.	345	do	Brigantine Buda.	15 00	T. Ling.
do 6.	244	do	do Zanoni.	16 00	J. Farrell.
do 6.	142	do	Schooner Howard.	6 00	J. Shanahan.
do 6.	93	do	do Laura.	7 50	A. McLellan.
do 8.	183	do	Barkentine Nelly.	14 00	E. Petrie.
do 11.	986	do	Steamship Western Star.	46 00	T. Shanahan.
do 11.	1,117	do	do George Clarkson.	52 00	J. Farrell.
do 11.	313	do	Brigantine Artos.	15 00	T. Ling.
do 11.	441	do	Barkentine Antella.	18 00	J. Farrell.
do 11.	94	do	Schooner Rose Mary.	5 00	A. McPherson.
do 11.	205	do	Brigantine Eliza.	12 00	A. McLellan.
do 12.	109	do	Schooner Sovereign.	9 00	J. Farrell.
do 12.	115	do	do Alice.	6 00	J. Shanahan.
do 13.	349	do	do Amanda.	20 00	T. Ling.
do 13.	161	do	Steamship Coila.	7 00	E. Petrie.
do 13.	80	do	Schooner Nelly Morrow.	2 50	A. McPherson.
do 15.	79	do	do Laurier.	4 00	J. Farrell.
do 17.	930	do	Steamship Cacouna.	44 00	J. Ryan.
do 19.	871	do	do Grandholm.	42 00	J. Shanahan.
do 22.	81	do	Schooner C. A. Chisholm.	7 50	E. Petrie.
do 22.	190	do	Steamship Kite.	14 00	T. Ling.
do 23.	246	do	do Panther.	16 00	A. McLellan.
do 25.	836	do	do Bona Vista.	40 00	E. Petrie.
do 30.	986	do	do Western Star.	46 00	J. Shanahan.
do 30.	871	do	do Grandholm.	40 00	J. Farrell.
do 30.	1,095	do	do Marmion.	50 00	T. Ling.
do 30.	1,086	do	do Oakdene.	50 00	A. McLellan.
do 30.	1,117	do	do George Clarkson.	52 00	E. Petrie.
do 30.	90	do	do Hercules.	10 00	A. McPherson.
Oct. 1.	88	do	Schooner Victory.	5 00	T. Ling.
do 1.	190	do	Steamship Kite.	14 00	J. Shanahan.
do 2.	742	do	Barkentine Lottie Stewart.	36 00	J. Farrell.

PILOTAGE Collected, Glace Bay District, Year ended 31st December, 1890—*Con.*

Date.	Tonnage.	Nationality.	Vessel.	Pilotage.	Pilot.
1890.				\$ cts.	
Oct. 2.	167	British.	Schooner Mary McLaughlin.	10 50	J. Ryan.
do 3.	81	do	do Lottie	7 50	E. Petrie.
do 3.	170	do	do J. L. Crossly.	7 00	A. McLellan.
do 5.	107	do	do Tyrone	6 00	J. Shanahan.
do 5.	99	do	do J. C. Kelly	5 00	A. McPherson.
do 5.	371	American.	Brigantine Hattie M. Baiu.	22 00	J. Ryan.
do 6.	183	British.	Barkentine Nellie	14 00	T. Ling.
do 7.	967	do	Bark Buteshire	46 00	E. Petrie.
do 7.	97	do	Schooner White Cloud.	5 00	J. Ryan.
do 7.	99	do	do Osprey	7 50	T. Ling.
do 7.	79	do	do Laurier	4 00	A. McPherson.
do 8.	244	do	Brigantine Zanoni	16 00	E. Petrie.
do 9.	1,095	do	Steamship Marmion	50 00	T. Ling.
do 9.	1,086	do	do Oakdene	50 00	J. Shanahan.
do 9.	688	do	do Coban	34 00	J. Ryan.
do 10.	75	do	Schooner Eldora	4 00	A. McPherson.
do 10.	81	do	do C. A. Chisholm	5 00	J. Farrell.
do 10.	1,117	do	Steamship George Clarkson	52 00	T. Ling.
do 10.	74	do	Schooner Ariel	4 00	J. Shanahan.
do 15.	324	do	Brigantine Darpa	20 00	E. Petrie.
do 15.	123	do	Schooner Clayola	9 00	J. Ryan.
do 16.	986	do	Steamship Western Star	46 00	E. Petrie.
do 16.	94	do	Schooner Georgina	5 00	A. McPherson.
do 16.	122	do	do Minnie Louise	12 00	J. Shanahan.
do 16.	148	do	Brigantine Alaska	6 00	J. Farrell.
do 16.	125	do	Schooner St. Ann	6 00	A. McLellan.
do 16.	117	do	do Hattie F. Rich	6 00	T. Ling.
do 17.	81	do	do Lottie	7 50	A. McLellan.
do 20.	832	do	Steamship Bona Vista	40 00	T. Ling.
do 20.	87	do	Schooner C. W. Mader	5 00	J. Farrell.
do 21.	98	do	do John Purney	5 00	A. McPherson.
do 21.	311	do	Steamship Falcon	20 00	J. Ryan.
do 21.	930	do	do Cacouna	44 00	E. Petrie.
do 21.	190	do	do Kite	14 00	J. Shanahan.
do 25.	737	do	Barkentine G. S. Pennery	27 00	J. Ryan.
do 25.	343	do	Steamship Eagle	20 00	E. Petrie.
do 25.	607	American.	Schooner Luther A. Robie	32 00	A. McLellan.
do 25.	191	British.	Brigantine Katie	10 50	J. Farrell.
do 25.	87	do	Schooner Bertie C. H.	5 00	A. McPherson.
do 25.	86	do	do Nelly B	5 00	T. Ling.
do 27.	99	do	do Asprey	5 00	E. Petrie.
do 27.	1,086	do	Steamship Oakdene	50 00	J. Farrell.
do 27.	106	do	Schooner Pioneer	3 00	A. McPherson.
do 29.	1,094	do	Steamship Marmion	50 00	A. McLellan.
do 29.	1,117	do	do George Clarkson	52 00	J. Ryan.
do 30.	168	do	Schooner Alta	3 50	J. Farrell.
do 30.	371	do	Brigantine Moss Rose	22 00	T. Ling.
do 30.	94	do	Schooner Susan and Annie	5 00	A. McPherson.
do 31.	99	do	do Hector W. McG	5 00	J. Ryan.
do 31.	67	do	do Crest of the Wave	4 00	A. McLellan.
do 31.	97	do	do White Cloud	5 00	T. Ling.
Oct. 31.	244	do	Brigantine Zanoni	16 00	J. Ryan.
Nov. 1.	1,089	do	Steamship Oakdene	50 00	E. Petrie.
do 3.	95	do	Schooner Georgina	5 00	J. Shanahan.
do 3.	190	do	Steamship Kite	14 00	J. Farrell.
do 3.	90	do	do Hercules	10 00	T. Ling.
do 4.	99	do	Schooner H. N. Batchelder.	5 00	A. McPherson.
do 4.	170	do	do T. L. Crossley	7 00	A. McLellan.
do 4.	118	do	do Donzella	6 00	E. Petrie.
do 5.	79	do	do Energy	7 50	T. Ling.
do 5.	99	do	do Kalevala	5 00	A. McPherson.
do 6.	109	do	do Isabella	6 00	J. Shanahan.
do 6.	161	do	do Annie Simpson	10 50	J. Ryan.
do 6.	98	do	do John Purney	5 00	E. Petrie.
do 7.	457	do	Barkentine Canning	34 00	J. Farrell.

PILOTAGE Collected Glace Bay District Year ended 31st December, 1890—*Continued.*

Date.	Tonnage.	Nationality.	Vessel.	Pilotage.	Pilot.
1890.				\$ cts.	
Nov. 7..	96	British...	Schooner Dominion.	5 00	J. Shanahan.
do 7..	693	American....	do James Boyce.	34 00	T. Ling.
do 7..	86	British	do Nelly B.	5 00	A. McPherson.
do 13..	190	do	Steamship Kite.	14 00	E. Petrie.
do 13..	1,086	do	do Oakdene.	50 00	J. Shanahan.
do 14..	87	do	Schooner Bertie C. H.	2 50	T. Ling.
do 17..	124	do	do Bonnie Doon.	6 00	J. Farrell.
do 17..	1,590	American....	do Tecumseh.	70 00	J. Ryan.
do 29..	1,169	do	Steamship Orian.	54 00	E. Petrie.
do 21..	190	British	do Kite.	14 00	T. Ling.
do 21..	787	do	Bark Ella Stewart.	38 00	J. Farrell.
do 24..	2,005	American....	Steamship Mackinaw.	88 00	A. McLellan.
do 25..	190	British	Schooner Mystery.	7 00	J. Ryan.
do 26..	632	do	Bark T. H. Master.	34 00	E. Petrie.
do 27..	161	do	Schooner Annie Simpson.	7 00	J. Farrell.
do 27..	240	do	Brigantine Acadia.	16 00	A. McLellan.
do 27..	99	do	Schooner Manoah.	7 50	T. Ling.
do 27..	244	do	Brigantine Zanoni.	8 00	A. McMillan.
do 27..	183	do	Barkentine Nelly.	14 00	J. Shanahan.
do 27..	101	do	Schooner Grace Carter.	9 00	E. Petrie.
do 27..	1,018	American....	do D. H. Rivers.	48 00	J. Farrell.
Dec. 3..	1,285	British..	Steamship Netherholm.	58 00	E. Petrie.
do 6..	730	do	Bark Hypatia.	36 00	J. Ryan.
do 6..	99	do	Schooner L. T. Selig.	2 50	A. McLellan.
do 6..	170	do	do T. L. Crossley.	3 50	A. McPherson.
do 6..	693	American....	do James Boyce F.	34 00	E. Petrie.
do 6..	190	British	Steamship Kite.	14 00	T. Ling.
do 13..	529	do	Brigantine Alaska.	30 00	J. Ryan.
do 13..	86	do	Schooner Nelly B.	5 00	A. McPherson.
do 13..	941	do	Bark Queen of the Fleet.	44 00	A. McLellan.
do 13..	99	do	Schooner Hector W. McG.	5 00	E. Petrie.
do 18..	190	do	Steamship Kite.	14 00	J. Farrell.
do 22..	161	do	do Coila.	10 50	J. Shanahan.
do 22..	654	do	Bark Albertina.	34 00	J. Ryan.
do 24..	132	do	Schooner Vesper.	6 00	E. Petrie.
do 26..	99	do	do Stella E.	5 00	T. Ling.
do 27..	360	do	Brigantine Prussia.	11 00	J. Farrell.
do 31..	99	do	Schooner J. L. Seleg.	5 00	A. McLellan.
				6,354 50	

RECEIPT and Disbursement Account for the Year ended 31st December, 1890.

Date.		Amount.	Total.
1890.		\$ cts.	\$ cts.
Jan. 1.	Balance to credit of fund.....	19 00	
May 1.	8 license renewals, at \$3.....	24 00	
do 1.	4 do boats, at \$1.....	4 00	
do 1.	1 do deck boat.....	5 00	
do 1.	License, British schr. "A. J. Heisler".....	10 00	
do 1.	do "Spring Bird".....	10 00	
			72 00
	CONTRA.		
Dec. 31.	Secretary's allowance.....	20 00	
do 31.	Commissioner's travelling fees.....	15 00	
do 31.	Balance to credit of fund.....	37 00	
			72 00

PILOT and License Fees for the Year ended 31st December, 1890.

License No.	Name of Pilot, &c.	Age.	Boats.	Fees.
				\$ cts.
1	Edward Petrie.....	57	1	4 00
2	Joseph Shanahan.....	51	1	4 00
3	John Ryan.....	43		3 00
4	Edmond Petrie.....	46	1	8 00
5	James Farrell.....	59		3 00
6	Alexander McLellan.....	54		3 00
7	Thos. Ling.....	50	1	4 00
8	Allan McPherson.....	48	1	4 00
9	Captain Petham, schr. "Spring Bird".....			10 00
10	Captain McKinnon, "A. J. Heisler".....			10 00
				53 00

RECAPITULATION.

8 renewal licenses, at \$3.....	\$24 00
2 coasting licenses, at \$10.....	20 00
4 open boat licenses, at \$1.....	4 00
1 decked boat license.....	5 00
	<u>\$53 00</u>

GLACE BAY, C.B., 31st December, 1890.

CHAS. H. RIGBY,
Secretary Pilotage Authority.

APPENDIX No. 10.

REPORT OF PILOTAGE AUTHORITY OF PICTOU, N.S., FOR THE CALENDAR YEAR ENDED 31ST DECEMBER, 1890.

OFFICE OF PILOT COMMISSIONERS,
PICTOU, N.S., 31st December, 1890.

SIR,—I have the honour to submit to you the Pilotage Returns for the Port of Pictou, for year ended 31st December, 1890.

Enclosed you will please find copy of regulations.

Angus McDonald, pilot No. 5, renewed his bonds, but did not pilot during the season, having found employment on shore.

Capt. Ross, lighthouse keeper, having died on 1st November ultimo, Pilot Wm. Munro, No. 11, has been appointed to fill the position.

I have the honour to be, Sir,

Your obedient servant,

WM. H. NOONAN,
Secretary, P.A.P.D.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

RECEIPTS and Expenditures of all Moneys received by or on behalf of the Pilotage Authority in respect of Pilots or Pilotage.

RECEIPTS.	\$ cts.
To Received from twelve pilots, bonds.....	12 00
do Pilotage dues as per statement	2,960 83
do Capt. Bacquet, license.....	40 00
Balance due secretary.....	87 97
	3,100 80
EXPENDITURES.	
By Paid pilots for pilotage.....	2,781 33
do "Colonial Standard," printing.....	7 25
do J. McK. Beattie, stationery.....	3 50
do Office rent and fuel.....	50 00
do Secretary's salary.....	200 00
Balance due secretary from last year.....	58 72
	3,100 80

<p>J. A. GORDON, A. J. PATTERSON, JOHN R. DAVIES, H. MCKENZIE, JAMES D. MCGREGOR,</p>	}	<p><i>Pilot Commissioners, Port of Pictou, N.S.</i></p>
---	---	---

TOTAL Amount received for Pilotage Dues for Season ending 1890.

	Amount.	Total.
	\$ cts.	\$ cts.
Total amount received.....		2,960 83
Of this amount—		
Received from sailing ships.....	752 50	
do steamships.....	2,208 33	2,960 83
Of this amount—		
Received from British ships.	2,284 58	
do Foreign ships.	676 25	2,960 83

Certified Masters—Amabel Bacquet, SS. “Miramichi.”
do Mates—Nil.

MEMORANDUM of Earnings of Pilots for 1890.

No.	Names.	Amount.
		\$ cts.
1	Alexander T. Powell.....	9 00
2	James Fraser.....	147 50
3	Bryant Rogers.....	140 94
4	William A Cooke.....	374 97
5	Angus McDonald.....	
6	H. H. Powell.....	123 00
7	Charles A. Cooke.....	603 29
8	George W. Powell.....	78 54
9	Daniel S. Smith.....	525 14
11	William Munro.....	219 25
12	Daniel McLeod.....	70 00
13	Angus Smith.....	489 70
		2,781 33

PILOT REGULATIONS.

1. The pilot limits for the port of Pictou (as established by Order in Council) shall extend from the most easterly point of Pictou Island, on a line running thence south-east, until it strikes the Gulf shore at Arisaig pier; and shall be bounded on the west by a line drawn from Amet Island to Rocky Point at the county line; and shall embrace all the navigable waters in the County of Pictou.
2. Every licensed pilot, at the time of receiving his license, shall give a bond to the Commissioners for his compliance with the harbour and pilot regulations, and the faithful performance of his duty as a pilot during the ensuing year, himself in the sum of eighty dollars (\$80) and two sureties, to the satisfaction of the Commissioners, in forty dollars (\$40) each, such bonds to be renewed every year during the pilot's continuance in office.
3. Every licensed pilot taking charge of any vessel shall in all cases behave himself civilly and be strickly sober while in the discharge of his duty, and use the

utmost care and diligence for the safety of the vessel, and to prevent her from doing damage to other vessels under a penalty not exceeding forty dollars (\$40) for every offence.

4. The pilot in charge of a vessel inward bound shall, when passing the light-house, require the master to hoist her national flag at the gaff, over the pilot's flag, and keep it flying while coming up the harbour, under a penalty not exceeding ten dollars (\$10) for every offence.

5. Every licensed pilot, before boarding any vessel, shall enquire if any infectious or contagious disease be on board, or if she be from any port or place making her liable to quarantine laws, or be an emigrant vessel; in either of such cases he shall not go on board, but his boat shall be towed astern. And he shall cause the national flag to be hoisted at the main, and shall bring her to anchor at the usual place appointed for riding quarantine, and shall not suffer any person to board or leave the vessel until she be visited by the health officer, nor then, without his permission under a penalty not exceeding forty dollars (\$40) for every offence.

6. Any questions or disputes arising between pilots, masters of vessels and others, respecting pilotage, or for any extra remuneration in cases of any extraordinary nature, and all other questions and disputes between them respecting salvage or otherwise, shall be submitted to the Commissioners, to be adjusted and decided by them, and the judgment of the Commissioners or a majority of them respecting such questions and disputes in which the subject matter does not exceed the sum of forty dollars (\$40) shall be final and binding on all parties; and every licensed pilot who shall act contrary to this regulation, or shall refuse or neglect to appear before the Commissioners, after twenty-four hours notice, when his attendance shall be required by them on any occasion, or shall give any unnecessary trouble, annoyance or detention to masters or vessels, shall, for every offence, be liable to a penalty not exceeding forty dollars (\$40), and also to suspension or dismissal at the discretion of the Commissioners.

7. No person shall be licensed as a pilot under twenty-one years of age, nor unless he shall have served as a licensed pilot, or as an apprentice, or otherwise, in some licensed pilot boat for at least three years; and shall, on examination, be found in every respect well qualified to discharge all the duties of a pilot.

8. Every licensed pilot who is not a partner in some company boat shall have his own boat either open or wholly or partly decked, and one man or a boy, not under sixteen years of age, to go in it with himself, under a penalty not exceeding ten dollars for every offence, and all pilot boats, owned either privately or by more than one person, and when open or wholly or partly decked, shall be approved and licensed by the Commissioners, and shall have all the numbers, names and other characteristics required and specified by section 75 of the said Pilotage Act, under the penalties therein prescribed for every offence.

9. Any number of licensed pilots (not exceeding four in number) may form themselves into a company, and own and pilot together in one boat, either wholly or partly decked; and every decked pilot boat shall be provided with at least two life preservers, under a penalty not exceeding ten dollars for every neglect—the earnings of such company to be equally divided among them, or otherwise, as they may agree among themselves.

10. Every licensed pilot or company shall be entitled to receive out of the pilotage fund the amount earned by him or them and paid into such fund on his or their account; and the one half of the pilotage dues received by the Commissioners under sections 57, 59 and 60 of the said Act, in cases when such pilot's services are not accepted when offered. And the licensed pilot shall also receive out of such fund, if any remaining, after payment of all necessary expenses, such further sum as the Commissioners in their discretion shall award to them respectively, or to their widows and families in cases of death, superannuation or accident.

11. Every pilot shall pay for his license the sum of twenty dollars, to be paid by him into the pilotage fund on receipt of his certificate, or to be deducted from

any amount he may be entitled to receive out of such fund, at the discretion of the Commissioners; and shall pay one dollar for his bond, and one dollar for every renewal thereof.

12. Every master or mate shall pay for his license the yearly sum of forty dollars on receipt of his certificate, or the renewal thereof, to be paid into the pilotage fund.

13. All pilotage dues, whether earned and collected by the pilots, or otherwise received by the Commissioners, shall be paid to the chairman of their Board, who shall keep a book for the entry of all sums received and of all sums paid out to the pilots or on any other account; and shall also keep a book to make the annual pilotage returns required by the 24th section of the Act.

14. Every licensed pilot who shall pilot any vessel inward shall, within one day after his arrival, and accompanied by the master, if on shore, report and pay to the said chairman the amount of pilotage fees due on such vessel, and shall give to the said chairman all the information required to be transmitted by him in his annual returns. And every licensed pilot shall likewise report all vessels piloted outwards by him and the fees paid thereon, and all vessels refusing his services when offered, either inward or outward bound; and every pilot neglecting or refusing to comply with this regulation shall be liable to a penalty not exceeding forty dollars (\$40) for every offence.

15. The rates of pilotage dues at the port or district of Pictou shall be as follows:—

RATES OF PILOTAGE.

Vessels of	80 to	140 tons,	\$ 6	inwards and	\$ 4	outwards.
do	140 to	200	do 10	do	6	do
do	200 to	300	do 12	do	8	do
do	300 to	400	do 14	do	9	do
do	400 to	500	do 15	do	10	do
do	500 to	600	do 16	do	11	do
do	600 to	700	do 17	do	12	do
do	700 to	800	do 18	do	13	do
do	800 to	900	do 19	do	14	do
do	900 to	1,000	do 20	do	15	do
do	1,000 and upwards	2½ cts. inwards and 2 cts. outwards.				

All vessels under 80 tons, \$4 inwards and \$2 outwards.

Docking and moving vessels from anchorage in harbour, \$4.

16. After arriving in the harbour, all vessels requiring the services of pilots in going up to the loading wharves at the East or Middle Rivers shall pay an additional sum of 25 cents per foot draft of water, and the same coming down the said rivers.

17. Vessels bound in and spoken to by a pilot shall pay half pilotage if the services of a pilot are not required.

Vessels bound out and not requiring the services of a pilot shall pay half pilotage to the pilotage authority.

All steamers bound in or out shall pay the same rates as sailing vessels.

Vessels making the harbour shall be free from compulsory pilotage inside an imaginary line drawn from Cole's Point to McKenzie's Head.

The pilotage authority may remit compulsory pilotage dues to steamers carrying Her Majesty's mails in whole or in part as to them may seem fit.

18. All vessels exempted from compulsory pilotage under the Act (and not taking a pilot in or out) requiring services of a pilot, to or from any of the loading wharves, shall pay 50 cents per foot draft of water, instead of 25 cents, as in the 16th section of the by-laws.

All vessels not exceeding 150 tons register shall be exempted from outward compulsory pilotage.

19. Any pilot piloting a vessel inwards shall be entitled to pilot her up and down rivers, and to sea, when she next leaves port, unless on complaint of the owner, master or agent of said vessel, the pilotage authority shall direct otherwise.

20. The number of pilots for the port of Pictou shall not exceed twelve.

21. No pilot shall be allowed to leave the pilotage district without having first obtained a special license.

J. A. GORDON,	}	<i>Commissioners.</i>
J. D. MCGREGOR,		
A. J. PATTERSON,		
J. R. DAVIES,		
H. MCKENZIE,		
W. H. NOONAN,		<i>Secretary.</i>

APPENDIX No. 11.

PILOTAGE RETURNS FOR THE PILOTAGE DISTRICT OF ST. MARY'S
AND LISCOMBE, IN THE COUNTY OF GUYSBOROUGH, PROVINCE
OF NOVA SCOTIA, DOMINION OF CANADA.

Pilot No. 1, EDWARD QUINN.

Name of Ship.	Rig.	Tonnage.	Port of Registry.	Inwards. Outwards.		Total.
				\$ cts.	\$ cts.	\$ cts.
Dinorah	Barque	316	Arundel	8 00	10 00	18 00
Christian Wilhelm	do	386	Fredrickstad	9 00	11 00	20 00
Brodrene	Brig	297	Arundel	7 00	9 00	16 00
J. G. C.	Schooner	40	Canada	2 80	2 80	5 60
Ladie	do	43	do	3 01	3 01	6 02
Electric	do	58	do	4 06	.....	4 06
Laura	do	93	do	4 00	6 00	10 00
Swallow	do	72	do	5 04	5 04	10 08
						89 76

Pilot No. 2, JOHN BYRNES.

Esmeralda	Barque	295	Fredrickstad	7 00	9 00	16 00
Sea Flower	Schooner	24	Canada	1 68	1 68	3 36
Havelock	do	77	do	5 39	5 39	10 78
Caboodle	do	93	do	4 00	6 00	10 00
						40 14

Pilot No. 3, ALFRED McDANIEL.

Can't help it	Schooner	40	Canada	2 80	.....	2 80
Caboodle	do	93	do	4 00	6 00	10 00
Lorne	do	55	do	3 85	3 85	7 70
Dart	do	40	do	2 80	.....	2 80
						23 30

This is a list of all the vessels taking Pilots for the District this year, from 31st December, 1889, up to 31st December, 1890, those marked Canada, are registered in the Dominion, the others are all Norwegians.

WILLIAM PRIDE,
Secretary to Pilot Commissioners.

31st December, 1890.

APPENDIX No. 12.

REPORT OF THE PILOTAGE AUTHORITY FOR THE DISTRICT OF
SYDNEY, C.B., FOR THE YEAR ENDED 31ST DECEMBER, 1890.

SECRETARY'S OFFICE,

NORTH SYDNEY, C.B., 2nd February, 1891.

SIR,—I beg to hand you returns for past year, consisting of:—

1. Number, age, name and amount received by every pilot.
2. Statement of arrivals and amount received for pilotage in each port.
3. Statement of receipts and expenditures.
4. Statement of account.

I been have delayed in sending forward the returns in consequence of not getting sooner the returns from the various ports.

I have the honour to be, Sir,

Your obedient servant,

W. PURVES.

Sec.-Treasurer P. A. of Sydney.

The Honourable,
The Minister of Marine and Fisheries,
Ottawa.

NUMBER, Age, Name and Amount received by each Pilot of the Sydney District,
during the Year 1890.

No.	Age	Name.	Amount.	No.	Age	Name.	Amount.
			\$ cts.				\$ cts.
1	68	John Brown.....	408 90	24	34	P. Young.....	396 54
2	64	John Curran.....	419 00	25	33	W. Brown.....	408 90
3	59	John Petrie.....	285 83	26	35	T. Ratchford.....	387 37
4	59	Con. Mullins.....	409 00	27	42	G. D. Townsend.....	392 25
5	61	D. McGillvary.....	409 00	28	44	J. B. McGillvary.....	404 12
6	53	W. Ratchford.....	392 15	29	47	T. Lyng.....	384 91
7	40	J. Cann.....	459 76	30	48	J. Fraser.....	301 25
8	40	J. Mullins.....	404 12				
9	48	S. Shannahan.....	413 29			Total paid Pilots.....	11,759 75
10	46	A. Ratchford.....	392 15				
11	50	J. Fraser.....	392 25				
12	40	J. McGillvary.....	426 58			<i>Apprentices.</i>	
13	47	A. McNeil.....	336 18				
14	60	H. McGillvary.....	409 00			Thomas McNeil.....	1,224 05
15	44	J. D. McGillvery.....	404 12			Ben Carroll.....	
16	39	John Carroll.....	408 90			Jos. Brown.....	
17	53	George Brown.....	459 76			Ber. Mullins.....	
18	48	L. Connell.....	329 75			P. G. Petrie.....	
19	34	J. Carroll.....	330 95			W. Shannahan.....	12,984 00
20	34	D. Petrie.....	392 20			A. McNeil.....	
21	38	J. McNeil.....	336 18			E. Cann.....	
22	36	P. Bink.....	408 90				
23	39	J. Shannahan.....	413 29			Grand Total.....	

STATEMENT of Arrivals paying Pilotage and Pilotage received in the District of
Sydney, C.B., during the Year 1890.

PORT OF SYDNEY.

Class of Vessels.	No.	Tonnage.	Amount.
			£ cts.
British steamers.....	81	79,739	
Foreign do	1	722	
British sailing vessels.....	13	2,637	
Foreign do	1	873	
Total tonnage.....	98	83,973	
British vessels.....			2,744 00
Foreign do			82 50
Total pilotage received....			2,826 50

INTERNATIONAL PIER.

British steamers.....	94	103,453	
Foreign do	2	1,852	
British sailing vessels.....	9	3,124	
Foreign do	4	665	
Total tonnage.....	109	109,094	
British vessels.....			3,404 00
Foreign do 3			100 00
Total pilotage received . . .			3,404 00

VICTORIA MINES OR SOUTH BAR.

British steamers.....	57	41,581	
Foreign do	12	16,888	
British sailing vessels.....	32	5,049	
Foreign do	2	220	
Total tonnage	103	63,738	
British vessels.....			1,661 00
Foreign do			538 50
Total pilotage received.....			2,199 50

NORTH SYDNEY.

British steamers.....	66	53,978	
Foreign do	14	12,258	
British sailing vessels.....	189	58,452	
Foreign do	78	14,901	
Total tonnage	347	139,589	
British vessels.....			3,782 86
Foreign do			1,515 50
Total pilotage received.....			5,298 36

STATEMENT of Receipts and Expenditure, Pilotage Authority of Sydney, C.B., 1890.

RECEIPTS.		\$ cts.	\$ cts.
Received for licenses and bonds.....		90 00	
do boats.....		18 00	
do masters licenses.....		170 00	
Total pilotage.....		13,828 36	14,106 36
EXPENDITURE.			
Paid pilots by collectors.....		12,984 00	
do collectors.....		683 36	
Collected for relief fund.....		161 00	
Office rent and fuel.....		45 00	
Expenses of 5 commissioners.....		150 00	
Books and printing.....		11 13	
Telegrams and postage.....		5 17	
Secretary and treasurer.....		100 00	14,139 66
Excess of Expenditure.....			33 30

STATEMENT of Account of the Pilotage Authority of Sydney, C.B., 1890.

DR.

CR.

1890.		\$ cts.	1890.		\$ cts.
Jan. 13..	To P. McGillvery for 1889....	10 00	Jan. 13..	By Balance from 1889.....	76 20
	do 1890.....	25 00		Relief collected, 1890.....	161 00
May 13..	Widow Brown.....	20 00		Interest on deposit.....	24 00
	do Daley.....	20 00	Jan. 31..	Balance down.....	98 79
	do Madore.....	20 00			
	do Mullins.....	20 00			
	Pilot Doyle, retired.....	50 00			
June.....	do Mullins do.....	25 00			
	do Petrie do.....	25 00			
Nov.....	Widow Daly.....	10 00			
	do Madore.....	10 00			
	do Brown.....	10 00			
	do Mullins.....	10 00			
	Pilot Petrie.....	25 00			
	do Mullins.....	25 00			
	Refunded pilots.....	17 50			
Dec	Exchange.....	4 17			
	Over expenditure.....	33 30			
		359 97			359 77
Jan. 31..	To Balance down.....	98 79		On deposit.....	600 00

RECAPITULATION.

Ports.	No. of Vessels.	Tonnage.	Amount.
			\$ cts.
North Sydney.....	347	139,589	5,298 36
Victoria.....	103	63,738	2,199 50
International.....	109	109,094	3,504 00
Sydney.....	96	83,973	2,826 50
Total.....	655	396,394	13,828 36

MASTERS LICENSED.

No.	Name.	Class.	Vessel.	Amount.
				8 cts.
1	J. P. Angrove	Steamship	St. Pierre	20 00
2	J. Patoine	do	Polino	20 00
3	D. Fraser	do	Caban	20 00
4	D. Anderson	do	Bonavista	20 00
5	E. Moore	Schooner	Fearnot	10 00
6	C. Ormiston	do	M. Millard	10 00
7	M. McPhee	Steamship	Cacouna	20 00
8	J. Delisle	do	Greatland	20 00
9	N. Curry	Schooner	Hopewell	10 00
10	J. Farquharsen	Steamship	Hanlan	20 00
			Total	170 00

NORTH SYDNEY, C.B., 31st January, 1891.

W. PURVES,
Sec.-Treasurer.

APPENDIX No. 13.

REPORT OF THE PILOTAGE DISTRICT OF NANAIMO, B. C., FOR THE
CALENDAR YEAR ENDING 31ST DECEMBER, 1890.

NANAIMO, B. C., 6th January, 1891.

The Honourable
The Minister of Marine and Fisheries,
Ottawa.

SIR,—Accompanying find Pilotage Returns of the Nanaimo Authority for the year ending 31st December, A.D. 1890, in accordance with the Pilotage Act, 1886.

The Board of Pilot Commissioners beg to recommend that a stone beacon be placed on Beacon Rock, Nanaimo Harbour, in lieu of the present iron beacon, which it is extremely difficult to see at night, and that an additional buoy be placed to mark the Middle Ground, Nanaimo Harbour.

In consequence of the increased traffic, especially of large ocean steamships, going in and out at all times of the day and night, the Board would further strongly recommend that a light be established and maintained at the entrance to Nanaimo Harbour.

I have the honour to be,

Your obedient servant,

C. C. McKENZIE,

Acting Secretary.

PILOTAGE RETURNS for the Year ending 31st December, 1890, according to the Pilotage Act, 1886, Section 22.

(a & b), Names and ages of Pilots, &c., and the Service for which Licensed.

Names.	Ages.	Service.	Remarks.
John Sabiston, sen.....	64	Harbour,	
John Sabiston jun.....	37	District.	
Wm. McLeod McDonald	50	do	Dismissed for drunkenness and neglect of duty.
Daniel Morrison.....	50	do	Resigned.
John W. Glaholm	38	do	
Jas. Peter Bendrodt.....	31	do	

(c). Rates of Pilotage Dues, &c:—

Half pilotage.....	\$ 1 per foot.
Full do	2 do
Gulf do	10 per diem.
Alaska steamers	40 per month.

(d). Total amount received for pilotage dues, distinguishing amounts from British and from foreign ships :—

Pilotage dues from British ships.....	\$ 2,744
do foreign ships	12,744
Total pilotage dues	<u>\$ 15,488</u>

(e). Receipts and expenditure :—

RECEIPTS.

Balance from 1889.....	\$ 930 94
Pilotage dues for year ending 31st Decem- ber, 1890.....	15,488 50
Light, license and renewals	90 00
Boat license.....	10 00
Examination fee.....	25 00
Fine.....	40 00
	<u>\$16,583 54</u>

EXPENDITURE.

Paid Pilot McDonald.....	2,175 63
Glaholm.....	2,939 17
Morrison	2,871 12
Sabiston, sen.....	3,290 90
Sabiston, jun.....	2,871 12
Beudrodt.....	547 34
Commissioners.....	280 00
Secretary	120 00
Treasurer	120 00
Rent	120 00
Printing by-laws, &c.....	35 00
Incidental expenses	55 00
	<u>\$15,425 28</u>
Balance for 1891.....	<u>\$ 1,158 26</u>

E. QUESNELL, *Chairman.*

C. C. McKENZIE, *Acting Secretary.*

Dated at Nanaimo, 6th January, 1891.

APPENDIX No. 14.

REPORT OF THE PILOTAGE AUTHORITY OF VICTORIA AND ESQUIMALT,
FOR THE CALENDAR YEAR ENDED 31st DECEMBER, 1890.

VICTORIA, B.C., 6th January, 1891.

SIR,—I have the honour to transmit herewith the Pilotage Returns for the Pilotage District of Victoria and Esquimalt, in the Province of British Columbia, for the year ending 31st December, 1890, as required by Section 24, Chapter 54, of the Act 36 Victoria, and trust that the same will reach you in ample season to be embodied in the usual Supplement to your Annual Report, and would appreciate a copy of same when printed and issued.

I have the honour to be, Sir,

Your most obedient servant,

EDGAR CROW BAKER,

Secretary-Treasurer Pilotage Authority.

WILLIAM SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

PILOTAGE RETURNS, Victoria and Esquimalt Pilotage District, B.C., 1st January to
31st December, 1890.

LICENSED PILOTS.

No.	Name.	Age.	Date of Issue.	Seniority.	Remarks.
1	James McIntosh...	62	23rd April, 1880...	9th Jan., 1873...	Originally a British Columbia Pilot.
2	John Thompson...	41	23rd do 1880...	4th Dec., 1878...	do do
3	James Ramsey...	60	21st Oct., 1889...	9th June, 1873...	do do
4	William Meyer...	40	6th May, 1890....	6th May, 1890..	Pilot also for Northern Waters.

N.B.—The foregoing is a list of licensed pilots, who are the only ones who have prosecuted such calling in the above-named district.

There are no Masters and Mates acting under license from this Pilotage Authority, all the certificates previously granted having expired by efflux of time.

Clauses I, II, III, page 213, Supplement to Nineteenth Annual Report, with reductions on pages 200 and 201 (Supplement to Twenty-first Annual Report) apply to this year also.

Same Acts and parts of Acts as last year apply to 1890, and list of exempted vessels and Puget Sound rates remain the same.

PILOTAGE DUES Collected, 1st January to 31st December, 1890.

Month.	British.	Foreign.	Total.	Remarks.
	\$ cts.	\$ cts.	\$ cts.	
January	101 50	607 00	607 00	N.B.—The total, \$9,531.50, does not include a sum, \$506, collected from the Puget Sound steamers, or \$20 collected from the American tug "Sea Lion."
February	131 50	601 60	703 10	
March	152 75	685 75	817 25	
April	94 60	669 25	822 00	
May	123 25	632 10	726 70	
June	134 25	775 25	898 50	
July	135 50	907 25	1,041 50	
August	161 25	809 00	944 50	
September	78 00	679 75	841 00	
October	86 70	695 50	773 50	
November	70 00	590 00	676 70	
December		609 75	679 75	
Total	1,269 30	8,262 20	9,531 50	

Dr.

RECEIPTS AND EXPENDITURE, 1st January to 31st December, 1890.

Cr.

Date.	Nature of Receipt.	Amount.	Date.	Head of Service.	Amount.
1890.		\$ cts.	1890.		\$ cts.
Jan. 1 to Dec. 31	To Balance from last year.	280 70	Jan. 1 to Dec. 31	By B. C. Pilots Division, Puget Sound surplus.	280 70
do 1 do 31	Pilotage Dues under Clause IV.	9,551 50	do 1 do 31	do earnings as per receipts.	8,578 34
do 1 do 31	"G. E. Starr," $\frac{1}{2}$ pilotage, outwards.	6 00	do 1 do 31	Fees to Commissioners, 12 months.	210 00
do 1 do 31	American tug "Sea Lion," $\frac{1}{2}$ pilotage, outwards.	20 00	do 1 do 31	Board of Examiners, examination fees.	60 00
do 1 do 31	Certificate fees, Puget Sound steamers.	500 00	do 1 do 31	Office expenses, fuel, gas and rent.	253 15
do 1 do 31	Examination fees, 3 in number.	60 00	do 1 do 31	Secretary-Treasurer, 12 months' salary.	600 00
do 1 do 31	License fees, 1 in number.	25 00	December 31	Balance at credit of Pilotage Authority	441 01
		10,423 20			10,423 20

Approved and certified correct.

RODERICK FINLAYSON, *Chairman*,
R. P. RITHEI, } *Commissioners*.
THOS. B. HALL, }

EDGAR CROW BAKER,
Secretary-Treasurer.

APPENDIX No. 15.

REPORT OF THE NEW WESTMINSTER AND YALE PILOTAGE AUTHORITY FOR THE CALENDAR YEAR ENDED 31ST DECEMBER, 1890.

VANCOUVER, B.C., 5th January, 1890.

SIR,—I have the honour (as provided for in the Pilotage Act) to submit to you the accounts for the year ending 31st December, 1890, of the Yale and New Westminster Pilotage Authority.

Hoping they will meet with your approval and that you will kindly acknowledge the same,

I have the honour to be, Sir,

Your obedient servant,

C. GARDNER JOHNSON,

Secretary Yale and New Westminster Pilotage Authority.

To the Honourable

The Minister of Marine, &c.,
Ottawa.

RECEIPTS and Expenditures of all Moneys received by or on behalf of the Pilotage Authority in respect of Pilots or Pilotage for Year ending 31st December, 1890.

RECEIPTS.

Balance in bank.....	\$	1,397 35
Pilotage fees.....		13,869 25
Fines.....		100 00
Licenses.....		30 00
	\$	<u>15,396 60</u>

EXPENDITURE.

Divided amongst pilots.....	\$	500 00
Paid pilots.....		12,483 03
Expense account.....		777 37
Balance in bank.....		1,636 20
	\$	<u>15,396 60</u>

BALANCE SHEET FOR 1890.

	Dr.	Cr.
Reserve fund.....	\$	872 35
Commission account.....		1,386 22
Fines account.....		100 00
Licenses account.....		55 00
Expense account.....	\$	777 37
Bank balance.....	1,636 20	
	\$	<u>2,413 57</u>
		\$ <u>2,413 57</u>

PILOTAGE RETURNS, New Westminster and Yale Pilotage Authority for 1890.

No. of License.	Name of Pilot.	Age.	Service.	Remarks.
1	Donald Urquhart.....	43	} Licensed to pilot vessels of any discription within the limits of the district.	Active.
2	William Ettershank.....	48		do
3	Thomas Bebbington.....	45		do
4	George Murray Robertson.....	40		do

Pilotage dues now in force are the same as were approved by Order in Council, 20th September, 1890.

PILOTAGE COLLECTED, 1890.

32 British Vessels, inward,	49,821 tons.....	\$	1,720 75
105 Foreign do do	181,138 do		4,246 75
46 British do outward	59,300 do		2,400 75
187 Foreign do do	201,126 do		5,501 00
			<u>\$ 13,869 25</u>

Many vessels pass in free that pay outward pilotage.

C. GARDNER JOHNSON,
Secretary, Yale and New Westminster Pilotage Authority.

APPENDIX No. 16.

REPORT OF THE ALBERTON PILOTAGE AUTHORITY FOR THE CALENDAR YEAR ENDED 31st DECEMBER, 1890.

ALBERTON, P.E.I., 2nd January, 1891.

SIR,—I have the honour to enclose herewith the Pilotage Returns for the Pilotage District of a part of Prince County, made up to 31st December last.

I have the honour to be, Sir,

Your obedient servant,

JAMES F. WHITE,

Chairman.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

PILOTAGE RETURNS for the District of Prince County, P.E.I., for the year 1890.

No.	Name.	Age	Date of License.	Service.	Amount Received.	British.	Foreign.	Total.
					\$ cts.	\$ cts.	\$ cts.	\$ cts.
2	George Wells	25	1889	General . .	45 70	40 02	5 68	
5	Charles Gallant	33	1890	do . . .	135 59	91 24	44 35	
9	John W. White	22	1890	do . . .	33 40	33 40		214 69
	LESS—5 per cent. for expenses per regulations							10 73
	Amount paid to Pilots							203 96

Pilots require copies of Pilotage Act.

APPENDIX No. 17.

MERCHANT SHIPPING.

The total number of vessels remaining on the register books of the Dominion on the 31st December, 1890, including old and new vessels, sailing vessels, steamers and barges, was 6,991, measuring 1,024,974 tons register tonnage, being a decrease of 162 vessels, and a decrease of 15,507 tons register, as compared with 1889. The number of steamers on the registry books on the same date was 1,364, with a gross tonnage of 206,855 tons. Assuming the average value to be \$30 per ton, the value of the registered tonnage of Canada, on the 31st December last, would be \$30,749,220.

The number of new vessels built and registered in the Dominion of Canada during the last year was 285, measuring 52,378 tons register tonnage. Estimating the value of the new tonnage at \$45 per ton, it gives a total value of \$2,357,010 for new vessels.

A statement follows, showing the number of vessels and number of tons on the register books at the different ports of registry in the Dominion, on the 31st December last, along with a comparative statement of the tonnage from 1873 to 1890. A statement is also published of the number of vessels built and registered in the Dominion during the last year, and a comparative statement of the number of new vessels built and registered from 1874 to 1890, both inclusive.

STATEMENT showing the Number of Vessels and Number of Tons on the Registry
Books of the Dominion of Canada on the 31st December, 1890.

PROVINCE OF NOVA SCOTIA.

Port.	Number of Vessels.	Number of Steamers.	Gross Tonnage Steamers.	Total Tonnage.
Amherst	12			1,133
Annapolis	75	2	53	11,527
Arichat	127	1	66	6,009
Barrington	42	1	15	1,786
Baddeck	1			75
Digby	163	4	123	12,932
Guysboro'	47			2,387
Halifax	839	46	5,571	60,601
Liverpool	84	2	48	7,982
Lunenburg	306	3	59	26,668
Maitland	33			30,720
Parrsboro'	112	2	41	25,366
Pictou	71	8	335	19,001
Port Hawkesbury	66	2	43	2,875
Port Medway	27	1	45	2,301
Pugwash	9			693
Shelburne	104	1	38	9,068
Sydney	121	9	685	5,092
Truro	4			1,214
Weymouth	35	1	154	3,059
Windsor	194	8	1,046	130,002
Yarmouth	321	13	2,049	103,703
	2,793	104	10,371	464,194

PROVINCE OF NEW BRUNSWICK.

Chatham	192	29	1,344	9,937
Dorchester	16			10,176
Moncton	13	2	50	2,626
Richibucto	18	2	107	4,275
Sackville	10	1	215	2,052
St. Andrew's	151	2	45	4,235
St. John	581	57	7,689	176,159
	981	93	9,450	209,460

PROVINCE OF PRINCE EDWARD ISLAND.

Charlottetown	231	18	3,678	26,080
---------------------	-----	----	-------	--------

PROVINCE OF QUEBEC.

Amherst	30			1,098
Gaspé	39	1	709	2,397
Montreal	469	143	51,286	80,915
New Carlisle	15	3	49	789
Percé	2			133
Quebec	844	123	19,918	78,671
St. John's				
	1,399	270	71,962	164,003

STATEMENT showing the Number of Vessels and Number of Tons on the Registry Books, &c.—*Concluded.*

PROVINCE OF ONTARIO.

Port.	Number of Vessels.	Number of Steamers.	Gross Tonnage Steamers.	Total Tonnage.
Amherstburg...	2			114
Belleville...	14	7	502	865
Bowmanville...	3			426
Brockville...	31	28	767	839
Chatham...	26	15	1,089	1,651
Chippawa...	3	2	263	153
Collingwood...	45	43	5,012	3,872
Cobourg...	6	2	51	474
Cornwall...	3	2	178	214
Cramahe...	2			278
Deseronto...	7	5	881	774
Dunnville...	9	5	636	1,027
Goderich...	38	19	810	1,991
Hamilton...	45	28	7,740	7,368
Kingston...	202	72	9,939	24,755
Morrisburg...	3	1	54	382
Napanee...	8	3	302	922
Oakville...	4			323
Ottawa...	177	91	10,624	18,896
Owen Sound...	32	29	4,826	3,379
Port Arthur...	4	4	361	244
Port Burwell...	16	6	167	2,008
Port Colborne...	6	2	95	680
Port Dover...	16	4	131	1,073
Port Hope...	63	38	2,796	5,642
Port Rowan...	7	1	168	935
Port Stanley...	9	7	1,754	1,409
Pictou...	32	9	450	2,950
Prescott...	27	13	613	3,885
Sault Ste. Marie...	12	10	512	576
Sarnia...	25	18	8,464	6,682
Saugeen...	6	6	402	275
St. Catharines...	128	56	9,948	21,084
Toronto...	206	136	11,350	14,565
Wallaceburg...	42	22	1,460	2,593
Whitby...				
Windsor...	53	25	5,687	5,434
	1,312	709	88,032	138,738

PROVINCE OF MANITOBA.

Winnipeg...	79	50	5,365	6,474
-------------	----	----	-------	-------

PROVINCE OF BRITISH COLUMBIA.

New Westminster...	53	41	4,454	4,410
Victoria...	143	79	13,543	11,614
Vancouver...				
	196	120	17,997	16,024

SUMMARY.

Nova Scotia...	2,793	104	10,371	464,194
New Brunswick...	981	93	9,450	209,460
P. E. Island...	231	18	3,678	26,080
Quebec...	1,399	270	71,962	164,003
Ontario...	1,312	709	88,032	138,738
Manitoba...	79	50	5,365	6,475
British Columbia...	196	120	17,997	16,024
	6,991	1,364	206,855	1,024,974

COMPARATIVE STATEMENT showing the Number of Vessels and Number of Tons on the Registry Books of the Dominion of Canada, on the 31st December, in each Year, from 1873 to 1890, both inclusive.

Provinces.	1873.		1874.		1875.		1876.		1877.		1878.		1879.		1880.		1881.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
New Brunswick..	1,147	277,850	1,144	294,741	1,133	307,926	1,154	324,513	1,133	329,457	1,142	335,965	1,135	340,491	1,097	336,970	1,087	333,215
Nova Scotia..	2,803	449,701	2,787	479,669	2,786	505,144	2,867	529,252	2,961	541,579	3,003	553,368	2,975	552,159	2,977	550,448	3,025	558,911
Quebec	1,842	214,083	1,837	218,946	1,831	222,965	1,902	228,502	1,951	248,399	1,676	248,349	1,975	246,025	1,889	233,341	1,830	224,936
Ontario.....	681	89,111	815	113,008	825	114,990	889	123,947	926	131,761	958	135,440	1,006	136,987	1,042	137,481	1,081	139,998
Prince Edward Island..	280	38,918	312	48,388	335	50,677	338	50,692	342	55,547	322	54,250	298	49,807	288	45,931	273	45,410
British Columbia.....	30	4,095	35	3,611	40	3,685	40	3,809	43	3,479	51	4,482	60	4,701	63	5,049	74	6,296
Manitoba					2	178	2	178	6	246	17	1,161	22	1,924	21	1,992	24	2,130
Total	6,783	1,073,718	6,930	1,158,363	6,952	1,205,565	7,192	1,260,893	7,362	1,310,468	7,469	1,333,015	7,471	1,332,064	7,377	1,311,218	7,394	1,310,896
Provinces.	1882.		1883.		1884.		1885.		1886.		1887.		1888.		1889.		1890.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
New Brunswick.....	1,065	308,980	1,107	315,906	1,096	308,132	1,060	288,589	1,042	269,224	1,027	255,126	1,009	239,332	1,013	218,873	981	209,460
Nova Scotia.	3,026	546,778	3,037	541,715	2,942	544,048	2,988	541,832	2,929	526,921	2,845	498,878	2,821	485,709	2,855	464,431	2,793	464,194
Quebec	1,754	213,804	1,739	216,577	1,628	202,842	1,631	203,635	1,630	232,556	1,586	189,064	1,498	178,520	1,455	168,500	1,399	164,003
Ontario.....	1,112	137,061	1,133	140,972	1,184	142,387	1,223	144,487	1,248	140,929	1,275	139,548	1,330	139,502	1,352	141,830	1,312	138,738
Prince Edward Island..	248	41,684	241	49,446	234	39,213	227	36,040	225	30,658	225	29,031	218	26,586	224	25,506	231	26,080
British Columbia.....	84	7,687	94	9,046	116	11,403	123	11,834	134	11,900	149	12,789	167	14,249	176	15,241	196	16,024
Manitoba	23	2,783	24	2,778	55	5,722	63	5,439	65	5,578	71	5,811	69	5,744	77	6,091	79	6,475
Total	7,312	1,260,777	7,374	1,276,440	7,254	1,253,747	7,315	1,231,856	7,294	1,217,766	7,178	1,130,247	7,142	1,089,642	7,153	1,040,481	6,991	1,024,974

LIST of Ports at which Vessels may be Registered, showing the number of new Vessels Built and Registered in the Dominion of Canada, during the Year ended 31st December, 1890.

PROVINCE OF NOVA SCOTIA.

Port.	Number of Vessels.	Registered Tons.
Amherst	12	1,133
Annapolis	5	1,047
Arichat	1	138
Barrington	2	44
Digby	3	545
Guysboro'	2	215
Halifax	18	1,579
Liverpool	6	1,237
Lunenburg	35	3,751
Maitland	2	2,630
Parrsboro'	16	4,038
Pictou	1	98
Port Medway	2	331
Port Hawkesbury	2	29
Shelburne	10	1,416
Sydney		
Truro		
Weymouth	1	106
Windsor	19	10,558
Yarmouth	13	5,012
	150	33,907

NEW BRUNSWICK.

Chatham	9	115
Dorchester		
Moncton	1	98
Richibucto	1	10
St. Andrews		
St. John	23	5,250
Sackville	1	99
	35	5,572

PRINCE EDWARD ISLAND.

Charlottetown	12	2,008
---------------------	----	-------

QUEBEC.

Amherst		
Gaspé	3	155
Montreal	12	4,120
New Carlisle		
Percé		
Quebec	10	605
St. John's		
	25	4,880

LIST of Ports at which Vessels may be Registered, &c., during the year ended 31st
December, 1890—*Concluded.*

ONTARIO.

Ports.	Number of Vessels.	Registered Tons.
Amherstburg.....		
Brockville.....	2	6
Belleville.....		
Bowmanville.....		
Chatham.....	2	103
Cobourg.....		
Collingwood.....	5	571
Cornwall.....		
Deseronto.....	1	3
Goderich.....	1	13
Hamilton.....	1	20
Kingston.....	3	542
Ottawa.....	5	503
Owen Sound.....	2	570
Picton.....	1	44
Port Burwell.....	1	3
Port Dover.....		
Port Hope.....		
Port Arthur.....		
Port Rowan.....		
Port Stanley.....		
Prescott.....	1	543
St. Catharines.....	3	173
Sarnia.....	1	1,372
Saugeen.....	1	11
Sault Ste. Marie.....		
Toronto.....	9	367
Windsor.....	2	73
Whitby.....		
Wallaceburg.....		
	41	4,917

MANITOBA.

Winnipeg.....	7	218
---------------	---	-----

BRITISH COLUMBIA.

New Westminster.....	5	404
Vancouver.....		
Victoria.....	10	472
	15	876

SUMMARY.

Nova Scotia.....	150	33,907
New Brunswick.....	35	5,572
Prince Edward Island.....	12	2,008
Quebec.....	25	4,880
Ontario.....	41	4,917
Manitoba.....	7	218
British Columbia.....	15	876
	285	52,378

COMPARATIVE STATEMENT of New Vessels Built and Registered in the Dominion of Canada during the Years ended 31st December, 1874 to 1890, both inclusive.

Provinces.	1874.		1875.		1876.		1877.		1878.		1879.		1880.		1881.		1882.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
New Brunswick.	99	42,027	65	33,433	61	31,040	54	31,158	56	27,368	43	19,067	63	18,896	57	18,259	66	16,820
Nova Scotia.	175	84,480	177	67,106	194	58,771	219	47,980	166	43,784	126	39,208	109	31,257	150	40,465	117	26,711
Quebec.	73	20,796	102	22,825	51	17,800	62	19,253	46	10,870	29	7,421	33	8,219	56	5,673	26	6,785
Ontario.	50	10,797	53	7,760	47	5,397	28	3,316	39	2,409	42	2,464	44	3,610	54	5,111	55	4,369
Prince Edward Island.	88	24,634	83	19,838	62	14,571	62	17,026	38	10,382	20	5,279	21	3,359	15	4,351	15	3,508
British Columbia.	5	276			1	121	2	204	2	45	5	788			2	85	8	1,631
Manitoba							3	48	1	15			1	100	2	116	1	289
Add new vessels built in Canada which proceeded to the United Kingdom under a Governor's pass without being registered	490	183,010	480	151,012	416	127,700	430	118,985	339	100,873	265	74,227	271	65,441	336	74,060	288	60,113
And new vessels which left Quebec for registration in Germany	6	7,746			3	2,721	2	1,943	1	663							1	1,029
Total.	496	190,756	480	151,012	420	130,901	432	120,928	340	101,506	265	74,227	271	65,441	336	74,060	289	61,142
	1883.		1884.		1885.		1886.		1887.		1888.		1889.		1890.			
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
New Brunswick.	72	21,103	46	12,888	34	7,736	34	4,931	18	2,909	32	2,530	50	4,792	35	5,572		
Nova Scotia.	202	35,765	178	42,032	102	24,703	93	20,948	87	12,310	116	12,965	126	19,645	150	33,907		
Quebec.	42	6,594	32	3,815	29	4,556	27	2,683	28	2,888	23	2,669	27	3,759	25	4,880		
Ontario.	34	4,311	58	4,446	45	4,509	52	2,075	66	2,993	62	5,095	45	3,259	41	4,917		
Prince Edward Island.	17	5,343	21	5,189	11	1,707	12	1,318	7	601	12	1,412	12	1,503	12	2,008		
British Columbia.	5	849	15	675	6	648	8	154	9	376	18	448	12	840	15	876		
Manitoba	2	125	37	3,366	13	320	3	98	8	439	1	11	8	548	7	218		
Add new vessels built in Canada, which proceeded to the United Kingdom under a Governor's pass without being registered.	374	74,090	387	72,411	240	43,179	229	32,207	224	22,516	204	25,130	280	34,346	285	52,378		
Add new vessels which left Quebec for registration in Germany																		
Total.	374	74,090	387	72,411	240	43,179	229	32,207	224	22,516	204	25,130	280	34,346	285	52,378		

TONNAGE of the Merchant Navies of the British Empire, the United Kingdom, the
Years 1820, 1830, 1840, 1850,

Countries.	1820.	1830.	1840.	1850.	1860.	1870.	1875.	Number.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
*British Empire (including United Kingdom)...	2,648,593	2,531,819	3,311,538	4,232,962	5,710,968	7,149,134	7,744,237	1
United Kingdom.....			2,724,107	3,504,944	4,586,742	5,617,693	6,087,701	2
Canada.....							1,205,565	3
Russia.....								4
Finland.....							300,721	5
Norway.....		109,197	276,697	298,315	558,927	1,022,515	1,419,308	6
Sweden.....						346,862	507,049	7
Denmark.....						178,646	244,100	8
Hamburg.....				71,257	142,416	184,496	219,567	9
Bremen.....	17,283	20,206	43,647	67,770	121,863	171,654	182,073	10
Total German Empire.....						982,355	1,084,882	11
Holland.....				292,576	433,922	389,614	410,689	12
Belgium.....			22,610	34,919	33,111	30,149	50,186	13
France.....			662,500	688,153	996,124	1,072,048	1,028,228	14
†Italy.....						1,012,164	1,044,337	15
‡Austro-Hungarian Empire.....						329,377	290,450	16
§Greece.....					263,075	404,063	262,032	17
§United States— Registered for oversea (foreign trade).....	619,048	576,475	899,765	1,585,711	2,546,237	1,516,800	1,553,827	18
¶Enrolled and licensed (including lake and river steamers).....	661,119	591,447	1,240,860	1,899,555	2,752,938	2,677,940	3,299,905	19

* In consequence of steps taken to clear the British Register in and since 1854, and of alterations in the system of measurement, the British tonnage since 1854, as compared with previous years, is a great deal less than it would have appeared to be if the old plan of taking the figures had continued.

† Small coasting vessels and fishing boats are included in the year 1870.

other principal Maritime Countries of Europe and the United States, in each of the 1860, 1870, 1875 and 1880-89.

Number.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1	8,447,171	8,575,560	8,796,517	9,131,418	9,314,496	9,323,615	9,246,732	9,135,512	9,209,883	9,472,060
2	6,519,772	6,641,267	6,908,650	7,196,401	7,363,707	7,387,208	7,322,016	7,296,291	7,427,753	7,724,159
3	1,311,218	1,310,896	1,260,777	1,276,440	1,253,747	1,231,856	1,217,776	1,130,247	1,089,642	1,040,481
4	467,884	.....	.....	500,554	471,210	485,784	492,030	.....	.....	.....
5	272,308	274,826	283,105	.....	.....	.....	.....	.....	.....	.....
6	1,518,658	1,520,404	1,530,004	1,547,194	1,583,434	1,563,020	1,524,076	1,503,572	1,534,540	.....
7	542,642	529,613	527,456	519,640	529,585	517,061	500,395	500,096	500,010	.....
8	249,466	253,409	256,858	266,396	281,343	278,738	272,500	270,515	270,941	.....
9	244,279	270,055	288,236	307,338	319,923	322,235	341,393	360,569	384,310	.....
10	270,209	280,088	299,397	307,559	319,465	319,213	334,015	324,918	325,522	.....
11	1,182,097	1,194,407	1,226,650	1,269,477	1,294,288	1,282,449	1,284,703	1,240,182	1,233,894	.....
12	328,281	305,046	302,790	309,764	308,339	302,769	286,455	256,310	245,416	.....
13	75,666	77,840	82,647	86,360	80,592	84,862	86,837	86,391	77,655	.....
14	919,298	914,373	983,017	1,003,679	1,033,829	1,000,215	993,291	972,525	961,073	.....
15	999,196	989,057	990,004	973,333	971,001	953,419	945,677	895,625	853,033	.....
16	290,971	286,556	288,011	280,184	281,346	269,763	261,588	233,179	218,041	.....
17	.....	.....	.....	.....	261,496	.....	.....	258,756	248,974	.....
18	1,352,810	1,335,586	1,292,294	1,302,095	1,304,221	1,287,999	1,111,179	1,015,563	943,784	1,021,595
19	2,715,224	2,722,148	2,873,639	2,933,392	2,967,008	2,977,935	3,019,957	3,090,282	3,248,132	3,285,880

‡ Including the vessels trading on the Danube. Excluding small coasting vessels and fishing boats.

§ Years ended 30th June. The tonnage for 1870 and subsequent years is new admeasurement.

|| Registered tonnage is that employed in the foreign trade. Enrolled and licensed is that employed in the river, lake and coasting trade.

APPENDIX No. 18.

STEAM Vessels Inspected for the Year ended 31st December, 1889.

WEST ONTARIO DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Athabasca.....	500	Mar. 15.....	2,269	189 52	Screw, passenger.
Alberta.....	500	do 14	2,282	190 65	do do
Carmona.....	373	April 14.....	980	86 40	Paddle do
Campana.....	300	do 14	1,679	142 32	Twin screw, passenger.
Manitoba		Not running..	2,616		Screw, passenger.
Cuba	125	April 8	931	82 48	do do
L. Shickluna.....		do 8	626	55 08	do freight.
Bruno		do 9.....	475	43 00	do do
W. B. Hall.....		do 9.....	608	53 64	do do
Anderson		do 10.....	16	6 28	do fishing tug.
Hiawatha		do 11.....	39	7 72	do harbour tug.
Ethel		do 11.....	13	6 04	do fishing tug.
Rover		do 11.....	51	9 00	do tug.
Susan C. Doty		do 12.....	26	7 08	do fishing tug.
Meteor.....	40	do 14.....	337	34 96	Paddle, freight and passenger.
Heather Belle.....		do 15.....	20	6 60	Screw, fishing tug.
Kincardine.....		do 15.....	199	20 92	do freight.
Atlantic.....	318	do 17.....	683	62 64	do passenger.
Northern Belle.....	250	do 17.....	322	49 04	do do
Baltic.....	307	do 17	1,324	113 92	Paddle, passenger.
Pacific.....	310	do 17	918	81 44	Screw do
Chicora	872	do 22	931	82 48	Paddle do
Cibola.....	1,176	do 22	961	84 88	do do
Imperial		do 23.....	245	27 60	Screw, freight.
John Harrison.....		do 24	44	10 00	do tug.

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Favourite	333	April 24.	491	47 28	do passenger.
Cambria	250	do 21.	937	82 96	Paddle do
C. W. Chamberlain		do 28.	385	35 80	Screw, freight.
Shewanaga		do 29.	96	12 66	do tug.
Fred. Davidson		do 29.	43	8 46	do do
Mabel		do 30.	11	5 95	do do
W. M. Alderson	190	May 2.	122	17 68	Twin screw, passenger.
W. J. Aikens		do 2.	42	8 36	Screw, tug.
Marshall & Murray		do 7.	16	6 28	do
May Flower		do 7.	14	6 12	do
John William		do 7.	14	6 12	do
Severn Belle		do 7.	8	5 56	do
H. L. Lovering		do 8.	55	9 40	do
Severn		do 8.	44	8 52	do
Eva Bell		do 9.	10	5 80	Screw, fishing tug.
Resolute		do 9.	139	16 12	Screw, tug.
Minnie Martin		do 9.	10	5 80	do
F. B. Maxwell	80	Nov. 15. 1890.	497	47 76	Paddle, passenger.
Edward Blake		May 12. 1891.	13	6 04	Screw, harbour tug.
Fred. A. Hodgson		do 13.	63	10 04	Screw, tug.
Waubashene		do 13.	97	12 76	do
G. P. McIntosh		do 13.	58	9 64	Screw, fishing tug.
Bertha Endress			32	7 56	Screw, tug.
James Story		May 17.	49	8 84	do
W. L. Davis			46	8 60	do
Edgar P. Sawyer			52	9 08	do
Clara Hickler			42	8 36	do
Hattie Vinton		May 29.	55	8 60	do
Houghton		do 30.	49	8 92	Twin screw, tug.
Annie Watt			61	9 88	Screw, tug.
Ongiara	244	June 3.	98	12 84	do passenger.
Orillia	225	May 28.	135	18 80	do do

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Longford.....	40	do 28	53	9 24	do do
Gypsy.....		June 5.....	20	6 60	do yacht.
Southwood.....	40	do 5	19	6 62	do passenger.
Comet.....		do 6.....	20	6 60	do tug.
Siesta.....		do 7.....	3	5 24	do yacht.
City of Midland.....	400	do 13	748	67 84	do passenger.
Butcher Boy.....		do 14	94	10 12	do freight barge.
Sea Flower.....		June 21.....	7	5 56	Screw, yacht.
Enterprise.....	289	do 20	148	19 84	do passenger.
R. Kendrick.....	40	do 21	15	6 20	do do
Nipissing.....	100	do 23.....	275	30 00	Paddle do
Rosseau.....		do 23.....	53	9 24	Screw, tug.
Ethel May.....		do 23	4	5 32	do
Lake Joseph.....		do 23	28	7 24	do
Ontario.....		do 23.....	11	5 88	do
Oriole.....	40	do 24.....	78	11 00	Screw, passenger.
Muskoka.....	40	do 24.....	99	12 92	do do
Bertha May.....		do 24	20	6 60	Screw, tug.
Lady of the Lakes.....	30	do 24	10	5 80	do passenger.
Kenozha.....	200	do 25	191	23 28	do do
Dauntless.....		do 25.....	7	5 56	do tug boat.
Onaganoh.....	45	do 25.....	19	6 52	do passenger.
Jennie Willson.....		do 26	7	5 56	do tug boat.
Edith May.....			45		do passenger.
Camilla.....		June 28	54	9 32	do yacht.
Wenonah.....	40	July 8	161	20 88	do and paddle passenger.
Emulator.....	15	do 8.....	25	7 00	Screw passenger.
Lady Katrine.....		do 8.....	16	6 28	do tug.
Excelsior.....	40	1890. Nov. 30.....	35	7 80	do passenger.
Mary Louise.....	40	do 29.....	64	10 12	do do
Florence	13	do 30.....	8	5 64	do do
Erastus Wiman.....	20	1891. July 9.....	54	9 32	do do

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1890.		8 cts.	
Northern	19	Nov. 30.	99	12 92	Paddle do
Cecebe		1891. July 11.	11	11 76	Screw, tug.
Abeona		do 14.	46	8 68	do yacht.
Siskiwit		Not running..	47		do tug.
Queen	20	June 11.	7	5 56	do passenger.
Isabella		July 21.	44	8 52	do tug.
Conqueror		do 21.	25	7 00	do do
Port Elgin Queen.		do 22.	37	7 56	do do
Tender	17	do 22.	31	7 40	do passenger.
Maud	35	do 23.	18	6 46	do do
Home Rule			3	5 26	do tug.
Pochahontas		July 24.	32	7 40	Paddle do
Eagle		do 26.	12	5 96	Screw do
Alfred Morrell		do 26.	40	8 76	do do
Adrelexa		do 26.	15	6 20	do do
Thames		do 28.	76	11 08	do freight.
Rock		do 28.	14	6 12	do fishing tug.
Superior		do 28.	82	12 12	do tug.
Equal Rights		Aug. 11.	6	5 48	do do
Mary Beck		do 12.	16	6 26	do do
Minniehaha		do 13.	32	7 56	do do
Maud S.		do 13.	14	6 12	do do
Seguin		do 16.	818	73 44	do freight.
Douglas		do 19.	5	5 40	do tug.
Sweet Mary		do 20.	13	6 04	do do
S. R. Norcross			22		do do
Maggie McLean			37		do do
Cherokee			179		do do
Mascot			21	6 68	do fishing tug.
Gertrude A. Rennie.			14		do do
Copanoning					do tug.
Purvis		Sept. 8.	13	6 04	do fishing tug.

STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*

Name of Vessels.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Advance		do 8	72	10 76	do do
Clara		do 8	12	5 96	do do
Skipper		Not registered.		5 64	do tug.
Fanny Arnold		Sept. 10	73	10 84	do do
P. S. Hiesorett		do 10	45	8 60	do do
Simpatica				5 00	do yacht.
Henry Smyth		Sept 10	40	8 20	do tug.
Annie Clark		do 12	52	9 08	do fishing tug.
Evangeline		do 13	24	6 84	do yacht.
Vixen		do 15	68	10 44	do tug.
George Dean		Not registered.		5 64	do do
Maggie May		Sept. 19	46	8 68	do do
Frank Reed		do 19	34	7 72	do do
P. M. Campbell		do 20	49	8 84	do do
Grace Darling		do 22	28	7 24	do do
Bob Foot			39		do fishing tug.
George Douglas		Sept. 24	42	8 36	do tug.
Alpha			34		do do
Maganetawan		Oct. 15	208	29 52	do do
			27,465	2,704 56	

JAMES JOHNSTON,
Steamboat Inspector.

STEAM VESSELS Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Ontario	500	Mar. 19.....	1,615	137 20	Paddle; car ferry.
Frank Jackman		do 24.. ..	39	8 12	Screw, tug.
Erin		do 26.. ..	512	45 96	do freight.
Dolphin		do 26.. ..	13	6 04	do tug.
Africa		do 27.. ..	482	43 56	do freight.
J. C. Clark	277	April 3.. ..	145	19 60	do ferry.
Niagara		do 5.....	468	42 44	do freight.
John Hunter		do 5.. ..	32	7 56	do tug.
Lewis Shickluna		Not certified..	16	6 28	do do
Alert		April 7.. ..	47	8 76	do do
Sylvester Neelon		do 7.....	46	8 68	do do
Tecumseh		do 7.. ..	840	72 20	do freight.
R. S. King		do 7.....	58	9 64	do tug.
Inez		do 7.....	59	9 72	do do
Mary		do 8.....	62	9 96	do do
Maggie		do 8.....	37	7 96	do do
Clinton		do 8.....	430	39 40	do freight.
Jane Armstrong		do 8.....	45	8 52	do tug.
Metamora		do 9.....	239	24 12	do do
Sir S. L. Tilley	10	do 9.....	1,178	102 24	do passenger and freight.
Enterprise		do 9.....	915	78 20	do freight.
H. Neelon		do 9.....	65	10 12	do tug.
James Norris		do 9.....	50	9 00	do do
M. R. Mitchell		do 9.....	40	8 20	do do
W. A. Rooth		do 9.....	52	9 16	do do
Nellie Bly		do 9.....	6	5 48	do fishing tug.
Dominion		do 9.....	478	43 24	do freight.
Charlton		do 10.. ..	261	25 88	do tug.
Lothair		do 10.. ..	413	37 96	do freight.
Onaping		do 10.....	256	25 48	do tug.
Hope	350	do 11.....	170	21 60	do ferry.
Saginaw		do 11.....	357	33 56	do tug.

STEAM VESSELS Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
United Lumbermen.....		do 12.....	399	36 90	do freight.
Lurline.....		do 12.....	66	10 28	do yacht and tug.
Acadia.....	125	do 15.....	806	72 50	do passenger.
Myles.....		do 15.....	1,211	101 88	do freight.
Lake Michigan.....		do 15.....	573	50 84	do do
Celtic.....	60	do 15.....	698	63 84	do passenger.
Canada.....	25	do 15.....	644	59 52	do do
St. Magnus.....	30	do 15.....	853	76 24	do do
Wales.....		do 16.....	350	33 00	do freight and tug.
Electric.....		do 19.....	4	{ 10 64 } 2 years { 49 64 }	do pleasure yacht.
Isaac May.....		do 21.....	558		do freight.
United Empire.....	396	do 22.....	1,961	164 88	do passenger.
Sovereign.....		do 23.....	684	59 72	do freight.
City of Chatham.....	553	do 24.....	341	35 28	do passenger.
Ocean.....	125	do 25.....	684	62 72	do do
Persia.....	150	do 25.....	757	68 56	do do
Lakeside.....	491	do 25.....	348	35 84	do do
Macassa.....	539	do 26.....	459	44 72	Twin screw, passenger.
Esperanza.....		May 1.....	17	6 36	Screw, yacht.
Canadian.....	340	do 6.....	231	26 48	Paddle, ferry.
John Hanlan.....	172	do 6.....	37	7 96	Screw, ferry.
Mascotte.....	128	do 6.....	49	8 92	do
Sadie.....	377	do 6.....	154	20 32	Paddle, ferry.
Modjeska.....	720	do 7.....	455	44 40	Twin screw, passenger.
Joe Mac.....		do 7.....	44	8 44	Screw, tug.
Hector.....		do 8.....	43	8 44	do
Ella Taylor.....		do 8.....	34	7 72	do
Golden City.....		do 8.....	35	7 80	do
Union.....	150	do 9.....	267	29 36	Paddle, ferry.
M. A. Bennett.....		do 9.....	34	7 72	Screw, tug.
Island Queen.....	100	do 12.....	23	6 84	do ferry.
Kathleen.....	200	do 12.....	110	16 80	do do

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Gertrude.....	163	May 12.....	76	11 08	Screw, ferry.
Arlington.....	100	do 12.....	23	6 84	do
Truant.....	100	do 12 . . .	23	6 84	do
City of London.....	300	do 13.....	79	11 32	Paddle, excursion.
Thames.....	300	do 13.....	82	11 56	do
Sea King.....		do 14.....	129	15 32	Screw, tug.
Dispatch.....		do 14.....	33	7 64	do fishing tug.
Kittie Haight.....		do 14 . . .	60	9 80	do tug.
Mazeppa.....	300	do 15.....	146	19 65	do passenger.
J. W. Steinhoff.....	463	do 16.....	312	32 96	do excursion.
Clarke Brothers.....		do 16.....	5	5 40	do freight tug.
Jessie L. McEdward.....	116	do 12.....	21	6 68	do ferry.
Ada Alice.....	64	do 19.....	15	6 20	do do
Chicoutimi.....	278	do 19.....	110	16 80	Paddle do
Rescue.....	20	do 19.....	7	5 56	Screw do
Luella.....	122	do 10.....	38	8 04	do do
Maid of the Mist.....	80	do 21.....	62	9 96	do do
Greyhound.....	491	do 22.....	337	34 96	do excursion.
C. H. Merritt.....	304	do 23.....	122	17 68	do do
Telegram.....	25	April 30..	322	33 76	do passenger.
Nina.....		May 28.....	11	5 88	do fishing tug.
City of Dresden.....	25	April 30..	194	23 52	do passenger.
Willie Scagel.....		May 28.....	22	6 76	do tug.
Viola.....		do 29.....	68	10 44	do yacht.
Blandina.....		June 2.....	46	8 68	do do
Lilly.....		do 2.....	22	6 76	do tug.
*City of Windsor.....	80	do 4.....	511	48 88	do passenger.
* Formerly "E. K. Roberts."					
Byron Trerice.....	120	do 4.....	268	29 44	do do
M. A. Laughlin.....		do 9.....	23	6 84	do tug.
Nautilus.....	40	do 9.....	9	5 72	do passenger.
Home Rule.....		do 10.....	81	11 48	do tug.
Dixie.....		Not certified..	37	7 96	do do

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Huron.....	500	June 17	1,052	92 16	Twin screw, cap ferry.
International.....	500	do 17	851	76 08	do do
Jessie		do 19	118	14 44	Screw, tug.
Ontario.		do 18	57	9 56	do do
W. J. Taylor.		do 18	9	5 72	do yacht.
Ruby.....	40	do 20	72	10 76	do passenger and tug.
Nellie May.....		do 20	11	5 88	do fishing tug.
Uncle John.....		do 20	7	5 56	do do
James Buckley..		do 20	10	5 80	do do
Kingfisher		do 20	14	6 12	do do
Lottie Maud.....		do 21	10	5 80	do do
Conservative.....		do 21	7	5 56	do do
Ida Bell		do 21	6	5 48	do do
Ripple		do 25	15	6 60	do tug.
W. O. Ireland.		do 25	105	13 40	do freight.
Harry Sewell.....		do 25	25	7 00	do tug.
Energy		do 25	116	14 28	do freight.
Messenger		do 25	15	6 20	do tug.
Starlight.....		do 25	16	6 28	do do
Ariadne		do 25	38	8 04	do do
Sea Gull		do 26	41	8 28	do do
Mary.....		Dec. 1 1890.	4	5 32	do do
Grace Darling.....		Dec. 26 1891.	26	7 08	do do
W. F. McRae.		do 26	46	8 68	do do
Interocean.....	40	do 26	148	19 84	do passenger.
Enna.....		do 26	6	5 48	do tug.
Frankie		do 26	24	6 92	do yacht and tug.
Spray.....		do 26	47	8 76	do tug.
*Eurydice.....	555	do 28	590	55 20	Paddle, excursion.
* Formerly "Hastings."					
Mayflower.....	900	do 28	189	23 12	do ferry.
Queen of the Isles.....	100	do 24	40	8 20	Screw, passenger.
Startled Fawn		July 4	25	7 00	do yacht.

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.			
Maggie Mason	40	July 7	56	9 46	Screw, passenger.
Naiad..	Registration	not completed.			do yacht.
Juno.....		July 10	210	21 80	do freight.
Ranger.....		do 11	8	5 64	do yacht.
Dominion.....	Registration	not completed.			do freight.
Vick.....		July 12	13	6 04	do tug.
Alfred Wilson.		do 12	33	7 64	do do
P. Cress		do 15	63	10 04	do freight.
Maud L.....		do 15	14	6 12	do tug.
Spray.....		do 16	15	6 20	do fishing tug.
Elgin.....		do 16	16	6 28	do tug.
Phenix.....		do 16	37	7 96	do do
Verbena May.....		do 16	5	5 40	do do
Ocean Lilly.....		Not certified..	3	5 24	do do
Agnes		July 17	23	6 84	do do
Eagle.....		Dec. 15	14	6 10	do do
J. H. Jones.....		July 18	208	21 64	do fishing tug.
Clenas.....		Aug 14	28	7 24	do do
A. Chambers.. ..		do 14.	23	6 84	do do
Orcadia.....		do 15	23	6 84	do do
Juno.....		do 14	28	7 24	do do
W. H. Seibold		do 13	22	6 76	do do
Myrtie.....		Not certified..	35	7 80	do do
Sea Gull.		do	19	6 52	do do
James Clark		Aug. 14	48	8 84	do do
Ivy Alderson.....	100	do 15	39	8 04	do passenger.
Maid of the Mill.....		Not certified..	8	5 72	do yacht.
H. H. Jennie.....		Dec. 1	148	16 84	do freight.
Primrose.....	900	Aug. 25	189	23 12	Paddle, ferry.
International.....		do 26	82	11 56	Screw, tug.
E. Windsor.....		Not certified..	86	11 88	do freight.
City of Mt. Clemms.....		Aug. 27	102	13 16	do do

STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Gordon Jerry		do 27	124	14 92	do do
Gordon Gauthier		do 30	26	7 08	do fishing tug.
Walter Scott		do 30	26	7 08	do do
Harold Gauthier		do 30	9	5 72	do do
Monarch	322	Sept. 13	2,017	169 36	do passenger.
Arbutus		do 18	49	8 92	do tug.
W. M. German			28	7 24	do passenger.
Lansdowne	300	Sept. 23	1,571	133 68	Paddle, car ferry.
Great Western	300	do 23	1,080	94 40	do do
Owen		do 27	103	13 24	Screw, freight.
C. J. G. Munro		Oct. 7	43	8 44	do tug.
Augusta		do 8	57	9 56	do do
Hiawatha	300	do 14	163	20 96	do ferry.
Lillie Smith			302	29 16	do freight.
			36,585	3,905,87	

O. P. ST. JOHN,
Steamboat Inspector.

STEAM Vessels not Inspected for the Year ended 31st December, 1890.

WEST ONTARIO DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Why not Inspected and Class of Vessel.
Algonquin	1,806	1,172	\$ cts. 149 48	Screw, freight. } Inspection waived by order of Department.
Rosedale.....	1,040	560	.....	Do do }
Ann Long.....	45	30	.....	do tug.....
Bruce.....	16	10	.....	do do.....
George Maytham.....	40	27	.....	do do.....
Herbert M.....	26	18	.....	do do.....
Ida.....	21	6	.....	do yacht.....
Kate Murray.....	3	2	.....	do tug.....
La Belle.....	75	58	.....	do freight.....
Lillie.....	50	34	.....	do passenger ..
Minnie Kidd.....	18	12	.....	do tug.....
Mocking Bird.....	38	26	.....	do passenger ..
Mizpah.....	18	12	.....	do fishing Tug.
Ontario.....	1,338	910	.....	do passenger ..
Prowett Beyer.....	10	6	.....	do do ..
Rupert.....	512	292	.....	Paddle do ..
River Bell.....	8	5	.....	Screw, yacht.....
Sunbeam.....	4	2	.....	do do ..
Stella.....	9	6	.....	do tug.....
Zephyr.....	19	11	.....	do yacht.....
City of Stratford	6	5	5 48	do tug ; laid up for repairs.
Myrtle.....	9	7	.....	Screw, passenger..
Saucy Jim.....	93	63	.....	do tug.....
*C. F. Dunbar.....	33	22	.....	do do ..
Rosamond.....	23	15	.....	do yacht.....
Uncle Jim.....	11	8	.....	do tug.....
Fanny.....	5	5	.....	Screw, fishing tug..
Halcro.....	8	5	.....	do yacht.....
James Leighton.....	23	16	6 84	do tug.....
Rescue.....	20	17	.....	do fishing tug..
Sutton Belle.....	6	4	.....	do tug.....
Sarah E. Day.....	5	4	5 32	do do ..
Welcome.....	21	14	.....	do fishing tug..

STEAM Vessels not Inspected for the Year ended 31st December, 1890—*Concluded.*

WEST ONTARIO DIVISION—*Concluded.*

Name of Vessel.	Gross Tonnage.	Regis- tered Tonnage.	Dues and Fees.	Why not Inspected and Class of Vessel.
			\$ cts.	
Othello.....	8	5	.....	Screw, fishing tug ; gone to Lake Superior.
R. F. Child	5	3	.....	Screw yacht ; gone to Lake Nipissing.
	5,372	3,490	167 12	

* Formerly H. B. Payne.

O. P. ST. JOHN,
JAMES JOHNSTON,
Steamboat Inspectors.

STEAM Vessels Inspected for the Year, &c.—Western Ontario—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Erin	Freight.....	April 14..	512·22	45 90	Screw ; all the lakes.
J. C. Clark.....	300	do 3..	145·23	19 60	do Sarnia and Port Huron.
Niagara	Freight.....	do 4..	668·00	42 44	do all the lakes.
Africa	do	do 8..	482·39	43 56	do do
Pacific	310	do 9..	918·08	81 44	do Collingwood and Soo.
Clinton	Freight.....	do 10..	430·00	39 00	do all the lakes.
Bruno	do	do 11..	474·98	43 00	do do
W. B. Hall.....	do	do 11..	607·70	53 64	do do
Cuba	125	do 11..	890·82	82 48	do Montreal and Chicago.
Sir S. L. Tilley.....	10	do 9..	1,177 77	102 24	do all the lakes.
Dominion	Freight.....	do 9..	478·13	43 24	do do
Enterprise	do	do 9..	914·92	78 20	do do
Lake Michigan	do	do 15..	573·00	50 84	do do
Myles	do	do 14..	1,210·63	101 88	do do
Acadia	125	do 14..	806·36	72 50	do Montreal and Chicago.
Wales	Freight.....	do 15..	350 01	33 01	do all the lakes.
Atlantic	318	do 17..	682·63	62 64	do Collingwood and Soo.
Baltic.....	307	do 17..	1,323·77	113 92	Paddle do
Northern Belle.....	250	do 17..	322 21	49 04	Screw ; Collingwood and Georgian Bay ports.
Canada.....	25	do 15..	444 45	59 52	do all the lakes.
Carmona	373	do 21..	979·93	86 40	Paddle ; Owen Sound and Soo.
Meteor	40	do 21..	336·61	34 96	do all the lakes.
Cambria	250	do 21..	937·26	82 96	do Owen Sound and Soo.
Campana	300	do 22..	1,678 79	142 32	Twin Screw ; Sarnia and Duluth.
Athabasca	500	do 22..	2,268·63	189 52	Screw ; Owen Sound and Pt. Arthur
Alberta.....	500	do 22..	2,282·14	190 56	do do do
L. Shicluna	Freight.....	do 8..	625·81	55 06	do all the lakes.
Ocean	150	do 24..	683·72	62 72	do Hamilton and Montreal.
St. Magnus	30	do 15..	852·85	76 24	do all the lakes.
Celtic	60	do 15..	698·04	63 84	do do
United Empire.....	396	do 22..	1,960·65	164 88	do Sarnia and Duluth.
Sovereign .....	.....	do 29..	684·08	59 72	Screw ; all the lakes.

STEAM Vessels Inspected for the Year ended 31st December, 1890.

WESTERN ONTARIO DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Hope.	350	do 30..	169·96	21 60	do Windsor and Detroit.
Telegram	25	do 30..	321·59	33 76	do Lake Erie.
City of Dresden.	25	do 30..	193·87	23 52	do do
Ontario	500	May 19..	1,615·40	137 20	Paddle; car ferry at Windsor.
Lakeside	491	April 25..	348·24	35 84	Screw; Toronto and St. Catharines.
Cibola	1,176	do 22..	961·47	84 88	Paddle; Toronto and Niagara.
Lothair	Freight.	do 10..	412·92	37 96	Screw; all the lakes.
C. W. Chamberlain.	do	do 28..	384·98	35 80	do do
Luella	122	May 10..	37·83	8 04	do Toronto; ferry.
Macassa	539	do 26..	459·06	44 72	Twin Screw; Toronto and Hamilton
Persia	150	April 25..	756·64	68 50	Screw; St. Catharines and Montreal
J. L. McEdwards	116	May 12..	21·40	6 68	do Toronto; ferry.
Island Queen	100	do 12..	23·31	6 84	do do
Arlington	100	do 13..	23·37	6 84	do do
Truant	100	do 13..	23·31	6 84	do do
Kathleen	200	do 13..	109·82	16 80	do Toronto and Long Branch.
Gertrude	163	do 13..	75·54	11 08	do Toronto; ferry.
Chicora	872	do 13..	930·50	82 48	Paddle; Toronto and Niagara.
Canadian.	340	do 14..	230·51	26 48	do Toronto; ferry.
Mascot.	128	do 14..	48·94	8 96	Screw do
John Hanlan	172	do 14..	36·96	7 96	do do
Sadie.	377	do 6..	154·18	20 32	Paddle do
Thames.	300	do 15..	81·72	11 56	do London and Spring Bank.
City of London.	300	do 15..	78·85	11 32	do do do
Union	150	do 16..	104·10	29 36	do Fort Erie and Black Rock.
Modjeska	720	do 7..	454·98	44 40	Twin Screw; Toronto and Hamilton
Mazeppa	300	do 15..	145·59	19 63	Screw; Burlington Bay.
Chicoutimi	278	do 20..	100·47	16 80	Paddle; Toronto and Lorne Park.
J. W. Steinhoff	463	do 16..	311·80	32 96	Screw; do Victoria Park
Ada Alice.	64	do 21..	15·43	6 20	do Toronto; ferry.
Greyhound.	491	May 22..	337·03	34 96	Screw; Toronto and Lorne Park.

STEAM Vessels Inspected for the Year, &c.—Western Ontario—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Favorite	333	do 23..	491·33	47 28	do Owen and Parry Sounds.
Maid of the Mist....	80	do 17..	61·97	9 94	do Niagara Falls.
Longford	40	do 28..	53·29	9 24	do Lake Couchiching.
Orillia	224	do 29..	134·59	18 80	do do
United Lumbermen.	Freight....	April 2..	398·91	36 90	do all the lakes.
City of Chatham....	553	do 24..	340·54	35 38	do Chatham and Detroit.
Byron Terrice.....	120	June 4..	268·04	29 44	do Sarnia and Amherstburg.
Ongiara	224	do 14..	97·77	12 84	do Lewiston and Niagara.
F. B. Maxwell	80	1890. Nov. 15..	197·11	47 76	Paddle; Midland and Parry Sound.
Southwood.....	40	1891. June 11..	18·78	6 62	Screw; Lake Couchiching.
Siesta.....			3·46	5 24	do not certificated; too small for passengers.
R. Kendrick	40	do 11..	14·96	6 26	do Lake Simcoe.
City of Midland....	309	do 14..	748·41	67 84	do Collingwood and Georgian Bay Ports.
W. M. Alderson....	191	do 13..	121·00	17 68	do Meaford and Nicholl's Bay.
C. H. Merritt.....	340	do 23..	121·58	16 68	do Toronto and Long Branch.
Huron	500	do 17..	1,051·41	92 16	Twin-screw; Sarnia and Pt. Huron.
International.....	300	do 17..	850·92	76 08	Screw do do
Nautilus.....	40	do 18..	8·65	5 72	do Welland Canal.
Enterprise	289	do 20..	148·19	19 84	do Lake Simcoe.
Oriole.....	40	do 54..	74·79	11 00	do Muskoka Lakes.
Lady of the Lakes...	30	do 24..	10·35	5 80	do do
Muskoka.....	40	do 25..	74·98	12 92	do do
Onaganah.....	25	do 25..	18·73	6 52	do do
Edith May.....			44·88		do not certificated; dues and fees not paid.
Kenoyho.....	200	do 26..	191·53	23 28	do Muskoka Lakes.
Nipissing.....	100	do 26..	275·45	30 00	do do
Mayflower	900	do 28..	189·40	23 12	Paddle; ferry; Toronto Bay.
Imperial.....	Freight....	April 23..	245·10	27 60	Screw; Georgian Bay Ports.
Dixie.....			37·02	7 96	do running as a tug in Grand River.
City of Windsor.....	80	July 5..	510·52	48 88	Screw; Windsor and Lake Huron.
Emulator.....	15	do 8..	24·99	7 00	do Maganettawan River.
Wenonah.....	40	do 8..	160·66	20 88	Paddle and screw; Burk's Falls.
Mary Louise.....	40	1890. Nov. 29..	63·62	10 12	Screw; Trading Lake.

STEAM Vessels Inspected for the Year, &c.—Western Ontario—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1890.		\$ cts.	
Florence.....	13	do 30..	8'42	5 64	do do
Erastus Wiman	20	July 9..	53'53	9 32	do Huntsville and places in vicinity.
Excelsior.....	40	Nov. 30..	34'62	7 80	do do do
Northern	19	do 30..	98'63	12 92	Paddle do do
Rescue.....	20	May 19..	7'22	5 56	Screw; Toronto Bay.
Eurydice.....	554	June 28..	589'89	55 20	Paddle; Toronto and Wilson, N.Y.
Manitoba.....			2,615'85		Screw; not running.
Maggie Mason	40	July 7..	55'77	9 46	do Hamilton Bay.
Juno.....	Freight....	do 10..	209'50	21 80	do all the lakes.
Ruby.....	40	do 20..	72'22	10 76	do Port Stanley and vicinity.
Kincardine.....	Freight....	April 15..	198'57	20 92	do all the lakes.
Equal Rights.....					Running as a tug at Penetanguishene
Ivy Alderson.....	100	Aug. 15..	38'67	8 04	Screw; Ports Dover and Rowan.
Adrelexa.....					do running as a tug at Midland.
Inter Ocean.....	40	June 26..	147'88	19 84	do Wallaceburg and Sarnia.
Sequin.....	20	Aug. 16..	818'07	73 44	do all the lakes.
Tender.....	17	July 22..	30'50	7 40	do Penetanguishene and Muskoka Mills.
Maud	35	do 23..	18'26	6 46	do Penetanguishene and Indian Cove.
Primrose.....	900	Aug. 25..	189'40	23 12	Paddle; Toronto Ferry.
Algonquin.....	Freight....	Sept. 8..	1,805'61	149 48	Screw; all the lakes.
Lansdowne.....	300	do 24..	1,570'90	133 68	Paddle; Car Ferry at Windsor.
Great Western	300	do 24..	1,080'33	94 40	do do
Monarch.....	332	do 13..	2,017'41	169 36	Screw; Sarnia and Duluth.
Hiawatha.....	300	Oct. 14..	162'62	20 96	do do Port Huron.
Lillie Smith.....	Freight....	Oct. 27..	302'31	29 16	do Kingston and Georgian Bay.
Tecumseh.....	do	April 11..	839'67	38 60	do all the lakes.
Cruiser					Government steamer.
Queen	20	June 11..	6'63	5 56	Screw; Belle Ewart and Rock's Point.
Bayfield					Government steamer.
Total.....			56,398'18	5,103 54	

THOS. HARBOTTLE,
Steamboat Inspector.

STEAM Vessels not Inspected for the Year ended 31st December, 1890.

WESTERN ONTARIO DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks.
				Why not Inspected and Class of Vessel.
			\$ cts.	
Mocking Bird.....	38·02	25·85	.. .. .	Passenger boat ; Owen Sound ; not run'g.
Ontario.....	1,103·91	750·95	.. .. .	do and freight ; Sarnia do
Rupert.....	511·97	292·48	.. .. .	do boat ; Toronto do
Lillie.....	49·53	33·69	.. .. .	do Niagara River do
Prowett Byer.....	10·14	6·26	.. .. .	do boat ; Hamilton do
Myrtle.....	9·40	7·45	.. .. .	Pleasure yacht ; Howard Lake do
Rosedale	1,040·49	659·78	.. .. .
Total.....	2,763·46	1,776·46		

The Rosedale has not been inspected on account of the Boiler Inspector not being authorized to sign a certificate of inspection ; her dues and fees had been paid at Owen Sound, 9th April, 1890, amounting to \$88.90.

THOS. HARBOTTLE,
Steamboat Inspector.

STEAM Vessels Inspected, &c.—East Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Armenia.....		Mar. 31.....	642·67	56 44	Screw, freight.
Traveller.....		April 16.....	207·52	21 64	Paddle, tug.
John A. Macdonald.....		do 3.....	273·00	26 84	do do
Hero.....	475	do 2.....	342·12	35 36	do passenger.
D. R. Van Allen.....		do 3.....	317·95	30 44	Screw, freight.
D. D. Calvin.....		do 5.....	749·53	65 00	do do
Chieftain.....		do 5.....	434·68	39 80	Paddle, tug.
Maud.....	390	do 7.....	292·81	31 44	do passenger.
Pierrepont.....	415	do 7.....	251·98	28 16	do do
Scotia.....		do 7.....	458·33	41 64	Screw, freight.
Reliance.....	25	do 8.....	239·14	27 12	Screw, freight and pas- senger.
Desoronto.....	84	do 8.....	67·91	10 44	Screw, passenger.
Armenia.....	275	do 8.....	109·99	16 80	do do
Resolute.....	25	do 9.....	371·86	37 76	Screw, freight and pas- senger.
Ella Ross.....	300	do 9.....	324·88	34 00	Paddle, passenger.
Rescue.....		do 10.....	52·29	9 16	Screw, tug.
Nile.....		do 10.....	96·30	12 68	do freight.
Glengarry.....	10	do 11.....	494·83	47 60	Screw, freight and pas- senger.
James A. Walker.....		do 11.....	183·58	19 72	Screw, tug.
David G. Thomson.....		do 12.....	185·05	19 80	do do
McArthur.....		do 12.....	190·46	20 20	do do
Norseman.....	450	do 12.....	782·71	70 64	Paddle, passenger.
Jessie Hall.....		do 14.....	56·54	9 56	Screw, tug.
Alma Munroe.....	124	do 17.....	890·82	79 28	Screw, freight and pas- senger.
Glide.....		do 18.....	77·90	11 24	Screw, tug.
Hiram A. Calvin.....		do 19.....	300·00	29 00	Paddle, tug.
Wm. Johnston.....		do 19.....	80·65	11 48	Screw do
Myra.....		do 22.....	73·21	10 84	do do
H. F. Bronson.....		do 23.....	137·12	15 96	do do
Active.....		do 23.....	345·88	32 68	do do
Empress of India.....	680	do 25.....	579·05	54 32	Paddle, passenger.
Alexandria.....	580	do 25.....	863·15	77 04	do do

STEAM Vessels Inspected for the Year ended 31st December, 1890.

EAST ONTARIO DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Rideau Belle	50	do 29.....	130·59	18 48	Screw do
Kathleen.	200	do 29	385·78	38 88	do do
Ranger		May 2	13·83	6 12	do tug.
Princess Louise.....	240	do 3. .	114·88	17 20	do passenger.
Lily		do 5.....	16·01	6 28	do tug.
Geraldine.....		do 7.....	17·90	6 44	do yacht.
John Haggart.	200	do 28.....	112·21	16 96	do passenger.
Col. By		do 10.....	9·31	5 72	do tug.
Water Lily.....		do 14.....	95·77	12 68	do freight.
Reindeer	140	do 15.....	58·29	9 64	do passenger.
Varuna.....	198	do 15... ..	134·04	18 72	do do
Mary Ethel.....	50	do 16	98·61	12 92	Centre wheel, ferry.
Eliza Bonar.....		do 16.....	25·68	7 08	Screw, tug.
Annie Gilbert.	30	do 17... ..	19·00	6 60	do passenger.
Nellie Cuthbert... ..	100	do 19.....	59·03	9 72	do do
D. P. Dey.....		do 17	11·26	5 88	do tug.
Ometa.....		do 19	21·59	6 76	do yacht.
A. B. Cook.		do 20.	34·17	7 72	do tug.
Saxon.....		do 20.....	180·90	19 48	do freight.
Water Lily.....		do 21.	4·00	5 32	do tug.
Freemason.....		do 23.....	104 82	13 40	do freight.
Spartan	350	do 27.....	1,168·72	101 52	Paddle, passenger.
Corsican.....	400	do 29.....	1,203·24	104 24	do do
Thistle.....		do 3.....	36·02	7 88	Screw, fishing tug.
Peerless.....		do 30.....	25·61	7 08	do tug.
Khartoum.....	39	do 21.....	62 71	10 04	do passenger.
Edmond.....		do 30.....	39·10	8 12	do tug.
Robert Anglin.....		do 27.....	97·18	12 76	do freight.
Eleanor.....		do 27.....	24·97	7 00	do tug.
Dream		June 10	12·16	5 96	do yacht.
Catherine.....	30	June 13	14·76	6 20	Screw, passenger.

STEAM Vessels Inspected, &c.—East Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1890.		\$ cts.	
City of Belleville.....	250	Dec. 31.....	101·16	16 08	do do
Pomona.....		1891. June 11.....	4·88	5 40	do yacht.
Echo.....	28	do 12.....	6·06	5 48	do passenger.
Island Queen.....	300	do 10.....	98·09	12 84	do do
Clipper.....		do 13.....	3·75	5 32	do yacht.
Carlton.....	35	do 13.....	8·11	5 64	do passenger.
Transit.....	450	do 18.....	140·81	19 20	do do
Umbria.....		do 16.....	42·98	8 44	do tug.
Caribou.....	250	do 17.....	144·19	19 52	do passenger.
Triton.....	25	do 16.....	11·11	5 88	do do
Dorothy.....		do 17.....	10·09	5 80	do yacht.
Spray.....		do 19.....	4·19	5 32	do do
Where Now.....		Not certified..	47·78	8 84	do do
Naiad.....		June 25.....	17·55	6 44	do do
Bell Amelia.....		Not certified..	3·80	5 32	do tug.
Nora.....	35	April 1.....	28·13	7 24	do passenger.
Emma Munson.....		May 18.....	32·63	7 64	do tug.
Vega.....	20	June 28.....	6·96	5 56	do passenger.
Antelope.....	40	do 17.....	19·59	6 60	do do
Pearl.....	16	July 11.....	7·70	5 64	do do
Sunbeam.....		do 11.....	13·43	6 05	do tug.
Beaver.....	75	do 12.....	18·00	6 44	do passenger.
Golden Eye.....	171	do 12.....	287·60	31 04	Paddle do
Daisy.....	60	do 14.....	7·20	5 56	Screw do
Express.....		do 15.....	3·90	5 32	do tug.
Eva.....		do 15.....	33·60	7 72	do do
Waterwitch.....		do 16.....	9·20	5 72	do do
Mary Louise.....	40	do 16.....	10·00	5 80	do passenger.
Myrtle.....		do 17.....	27·46	7 16	Paddle, tug.
Alice Ethel.....	175	do 17.....	71·75	10 76	do passenger.
Stranger.....		do 18.....	28·00	7 24	Screw, tug.
Dominion.....	100	do 18.....	45·88	8 68	Paddle, passenger.

STEAM Vessels Inspected, &c.—East Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Esturion.....	325	do 22.....	118·36	17 44	do do
Beaubocage.....	150	do 22.....	129·00	18 32	do do
Zetta Bruce.....	25	do 24.....	8·75	5 72	Screw do
Maple Leaf.....	70	do 24.....	26·08	7 08	do do
Bella Fair.....		do 24.....	6·60	5 56	do tug.
Dawn.....	35	do 26.....	20·20	6 60	do passenger.
Mary Ellen.....	117	do 28.....	44·50	8 60	do tug.
Undine.....		do 28.....	4·90	5 40	do yacht.
Cruiser.....	75	do 29.....	39·10	8 12	do passenger.
Garnet.....		Aug. 1.....	18·98	6 52	do do
Marquis of Lorne.....		do 4.....	20·19	6 60	do yacht.
Zeila.....		Not certified..	3·40	5 24	do do
Corrella.....		Aug. 6.....	3·81	5 32	do do
Princess Louise.....	100	do 19.....	26·36	7 08	do passenger.
Grenada.....	175	do 19.....	57·00	9 56	do do
Mona.....		do 20.....	24·87	7 00	do tug.
Albert Wright.....		do 20.....	29·00	7 32	do do
Sarah Daly.....		do 21.....	24·61	7 00	do do
Fearless.....		do 21.....	46·38	8 68	do do
Ivy.....	35	do 22.....	7·43	5 56	do passenger.
Gilbert.....		do 23.....	40·83	8 28	do tug.
Alaska.....	100	do 23.....	48·74	8 92	do passenger.
Alert.....	40	do 23.....	49·83	9 00	do do
Ventura.....		do 26.....	6·77	5 56	do yacht.
Ingomar.....		Sept. 4.....	18·21	6 44	do do
Prince Edward.....		do 12.....	18·22	6 44	Centre wheel, ferry
Alberta.....		do 12.....	68·00	10 44	do do
Daisy.....		do 13.....	4·89	5 40	Screw, yacht.
Tropic.....	35	do 5.....	8·86	5 72	do passenger.
Nellie.....		Sept. 18.....	6·82	5 56	do yacht.
May Flower.....		do 19.....	4·20	5 32	do tug.

 STEAM Vessels Inspected, &c.—East Ontario Division—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Enterprise		Not certified ..	60·38	9 80	Paddle, tug.
Ontario Belle		Sept. 20	7·00	5 56	Screw, yacht.
Total	17,104·11	2,083 73	

EDWARD ADAMS,
Steamboat Inspector.

STEAM Vessels not Inspected for the Year ended 31st December, 1890.

EAST ONTARIO DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks.
				Why not Inspected and Class of Vessel.
			\$ cts.	
Outlet Queen.....	18·45	12·07	.....	Not employed ; screw wheel, passenger.
Siesta.....	14·96	9·48	.....	do do yacht.
Anna.....	7·89	6·49	.....	do do tug.
Utica.....	52·00	39·00	.....	do do passenger.
Pioneer.....	28·07	19·09	.....	do do do
Anglo-Saxon.....	69·01	43·41	.....	do paddle, tug.
Mary Ellen.....	81·20	51·16	.....	do do
	271·58	180 70	.....

EDWARD ADAMS,
Steamboat Inspector.

STEAM Vessels Inspected for the year ended 31st December, 1890.

EAST ONTARIO DIVISION.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Armenia.....		Mar. 21.....	642·67	56 44	Screw, freight.
D. R. Vanallen.....		April 3.....	317·95	30 44	do do
D. D. Calvin.....		do 5.....	749·53	65 00	do do
Maud.....	390	do 7.....	292·81	31 44	Paddle, passenger.
Scotia.....		do 7.....	458·33	41 64	Screw, freight.
Reliance.....	25	do 8.....	239·14	27 12	Twin screw, passenger.
Deseronto.....	85	do 8.....	67·91	10 44	Screw do
Armenia.....	275	do 8.....	109·99	16 80	do do
Resolute.....	25	do 9.....	371·86	37 76	Twin screw do
Glengarry.....	10	do 11.....	494·83	47 60	Screw do
Hero.....	475	do 3.....	342·12	35 36	Paddle do
Norseman.....	450	do 12.....	782·71	70 64	do do
Pierrepont.....	415	do 7.....	251·98	28 16	do do
Alma Monro.....	125	do 17.....	890·82	79 28	Screw do
Empress of India.....	680	do 25.....	579·05	54 32	Paddle do
Alexandria.....	580	do 25.....	863·15	77 04	do do
Rideau Belle.....	50	do 29.....	130·59	18 48	Screw do
Kathleen.....	200	do 29.....	385·78	38 88	do do
Princess Louise.....	240	May 3.....	114·88	17 20	do do
Ottawa.....	200	do 12.....	116·00	17 28	Paddle do
Union.....	35	do 12.....	75·04	11 00	Screw do
Reindeer.....	140	do 15.....	58·29	9 64	do do
Varuna.....	198	do 15.....	134·04	18 72	do do
Mary Ethel.....	50	do 16.....	98·61	12 92	Centre wheel do
Annie Gilbert.....	30	do 17.....	19·00	6 60	Screw do
Nellie Cuthbert.....	100	do 19.....	59·03	9 72	do do
Saxon.....		do 20.....	180·90	19 48	do freight.
Ella Ross.....	300	April 9.....	324·88	34 00	Paddle, passenger.
Isaac May.....		do 21.....	558·28	49 64	Screw, freight.
Spartan.....	350	May 27.....	1,168·92	101 52	Paddle, passenger.
Corsican.....	400	do 29.....	1,203·24	104 24	do do

STEAM Vessels Inspected, &c.—East Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
John Haggart.....	200	do 28	112·21	16 96	Screw do
Island Queen.....	300	June 10.....	98·09	12 84	do do
City of Belleville.....	250	Dec. 31.....	101·17	16 08	do do
Echo	28	June 12.....	6·06	5 48	do do
Catherine	32	do 13.....	14·76	6 20	do do
Carlton	35	do 13.....	8·11	5 64	do do
Triton.....	25	do 16.....	11·11	5 88	do do
Caribou.....	250	do 17.....	144·19	19 52	do do
Transit.....	450	do 18.....	140·81	19 20	Twin screw, car ferry.
Spray.....		None issued...	4·19	5 32	Screw, passenger.
Belle Amelia		do	3·80	5 32	do do
Nora.....	35	April 1.....	28·13	7 24	do do
Queen of the Isles.. ..	100	June 4.....	40·22	8 20	do do
Enterprise	200	do 30	7·62	5 64	Scow do
Vega.....	20	do 28.. ..	6·96	5 56	Screw do
Khartoum	39	May 21.....	62·71	10 04	do do
Antelope.....	40	June 17.....	19·59	6 60	do do
Pearl.....	16	July 11	7·70	5 64	do do
Beaver.....	75	do 12	18 00	6 44	do do
Ark	192	do 12.....	48·20	3 84	Scow do
Golden Eye.....	171	do 12.....	287·60	31 04	Paddle do
Daisy.....	60	do 14.. ..	7·20	5 56	Screw do
Otonabee.....	200	do 15.....	49·00	3 92	Scow do
City of Peterboro.....	385	do 14.....	49·50	3 92	do do
Jumbo	100	do 14.....	13·40	1 06	do do
Consort	110	do 15.. ..	16·20	1 28	do do
Lindsay.....	575	do 16.....	75·00	6 00	do do
Mary Louise.....	40	do 16	10·00	5 80	Screw do
Luella.....	90	do 16.....	20·00	1 60	Scow do
Alice Ethel.....	175	do 17.....	71·75	10 75	Paddle do
Dominion.....	100	do 18	45·88	8 68	do do
Paragon.....	400	do 19.....	71 00	5 68	Scow do

STEAM Vessels Inspected, &c.—East Ontario Division—*Continued.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Esturion.....	325	do 22	118·36	17 44	Paddle do
Beaubocage	150	do 22.	129·00	18 32	do do
Poloma	750	do 23.....	121·50	9 72	Scow do
Maple Leaf.....	70	do 24.....	26·08	7 08	Screw do
Zetta Bruce.....	25	do 24.....	8·75	5 72	do do
Chemong.....	300	do 25.....	103·23	8 25	Scow do
Dawn.....	35	do 26.....	20·20	6 60	Screw do
Mary Ellen.....	117	do 23	44·50	8 60	do do
Katchawanook.....		Not granted..	29·53	2 36	Scow do
Cruiser.....	75	July 29.....	39·10	8 12	Screw do
Wave Crest.....	200	do 28.....	42·21	3 37	Scow do
Princess Louise.....	100	Aug. 19	16·36	7 08	Screw do
Ivy.....	35	do 22	7·43	5 56	do do
Grenada	175	do 19	57·00	9 56	do do
Alert.....	40	do 23.....	49·83	9 00	do do
Alaska	100	do 23.....	48·74	8 92	do d
Alberta	Ferry.	Sept. 12	68·00	10 44	Centre wheel, ferry.
Prince Edward	do	do 12.....	18·22	6 44	do do
Tropic.....	35	do 5.....	8·87	5 72	Screw, passenger.
Total			14,649·39	1,600 04	

THOMAS DONNELLY,
Steamboat Inspector.

STEAM Vessels not Inspected for the year ended 31st December, 1890.

EAST ONTARIO DIVISION.

Name of Vessel.	Gross Tonnage.	Regis- tered Tonnage.	Dues and Fees.	Why not Inspected and Class of Vessel.
			\$ cts.	
Utica	52·06	39·00	Not paid.	Not employed, screw, passenger.
Pioneer.....	3·80	2·60	do	do do do
Outlet Queen.	18·45	12·07	do	do do do
Fearless.....	46·38	31·54	8 68	Employed as tug only.
Total	120·63	85·21	8 68	

THOS. DONNELLY,
Steamboat Inspector.

STEAM Vessels Inspected for the Year ended 31st December, 1890.

MONTREAL DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.		Remarks.
				\$ cts.	\$	
		1891.				
Welshman		April 11..	143	11 44	5	Screw ; freight.
Antelope		do 17..	82	6 56	5	do tug.
St. George		do 22..	20	1 60	5	do do
Hochelaga	775	do 23..	419	33 52	8	Side wheel ; passenger
Longueuil	850	do 23..	365	29 20	8	do
Union	40	do 25..	75	6 00	5	Screw ; passenger.
Pembroke		do 25..	162	12 96	5	Side wheel ; tug.
Dauntless		do 25..	342	27 36	5	do
H. F. Bronson		do 25..	72	5 76	5	Screw ; tug.
Hiram Robinson		do 25..	61	4 88	5	do
Ottawa	200	do 25..	116	9 28	8	Side wheel ; passenger
Pattie		do 25..	272	21 76	5	do tug.
J. L. Murphy		do 26..	173	13 84	5	Screw ; tug.
G. H. Perley		do 26..	102	8 16	5	do
E. B. Eddy		do 28..	78	6 24	5	do
Dolphin		do 28..	70	5 60	5	do
Agnes McMahon		do 28..	82	6 56	5	do
Elgin		do 29..	108	8 64	5	do
Notter		do 29..	13	1 04	5	do
100 Island Rambler	50	do 29..	20	1 60	5	Screw ; passenger.
Empress	800	do 29..	677	54 16	8	Side wheel ; passenger
Minnie Bell		do 29..	22	1 76	5	Screw ; tug.
Mansfield	50	do 30..	121	9 68	8	Side wheel ; passenger
Geo. A. Harris		do 30..	87	6 96	5	Screw ; tug.
Vesta (yacht)		do 30..	14	1 12	5	do yacht.
G. B. Pattie		do 30..	30	2 40	5	do tug.
Monitor		do 30..	333	26 64	5	Side wheel ; tug.
Albert		do 30..	217	17 36	5	do
Olive	225	May 20..	213	17 04	8	Screw ; freight and passenger.
Windemere (yacht)		do 21..	35	2 80	5	do yacht.
Grain Elevator No. 10		do 22..	173	13 84	5	Elevating grain.

STEAM Vessels Inspected, &c.—Montreal Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid	Remarks.
		1891.		\$ cts. \$	
Grain Elevator No. 14.....		do 22..	181	14 48 5	do
do 11.....		do 22..	169	13 52 5	do
do 12.....		do 22..	183	14 64 5	do
do 7.....		do 22..	170	13 60 5	do
Owens.....		do 22..	156	12 48 5	Side wheel; tug.
Princess.....	443	do 23..	579	46 32 8	do passenger
Maude.....	350	do 23..	269	21 52 8	do do
Prince of Wales.....	500	do 23..	610	48 80 8	do do
Grain Elevator No. 9.....		do 23..	172	13 76 5	Elevating grain.
do 13.....		do 23..	178	14 24 5	do
Nosbonsing.....		do 25..	25	2 00 5	Screw; tug.
Booth.....		do 25..	234	18 72 5	Side wheel; tug.
John B. Fraser.....	200	do 25..	118	9 44 8	do passenger
Sparrow.....		do 25..	25	2 00 5	Screw; tug.
Archie Stewart.....		do 26..	80	6 40 5	do
Vermont.....		do 26..	206	16 48 5	Side wheel; tug.
John.....		do 26..	203	16 24 5	do
Ada.....		do 26..	28	2 24 5	Screw; tug.
Hiram Easton.....		do 26..	34	2 72 5	do
E. G. Laverdure.....		do 26..	54	4 32 5	Screw; passenger.
John Heney.....		do 27..	19	1 52 5	do tug.
Resolute.....		do 27..	30	2 40 5	do tug.
Birdie Jones.....		do 27..	2	0 16 5	do passenger.
Pearle.....		do 28..	5	0 40 5	do do
E. Davis.....		do 28..	37	2 96 5	do do
Janet Craig.....	50	do 29..	12	0 96 5	do do
Grain Elevator No. 6.....		June 9..	170	13 60 5	Elevating grain.
do 1.....		do 9..	83	6 64 5	do
Filgate.....	500	do 10..	263	21 04 8	Side wheel; passenger
Cultivateur.....	100	June 11..	152	12 16 8	Stern-wheel; passen- ger.
South Eastern.....	700	do 11..	395	31 60 8	Screw; passenger.
Coban.....	40	do 12..	1,063	85 04 8	do freight and passenger.

STEAM Vessels Inspected for the Year, &c.—Montreal Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.		Remarks.
		1891.		\$	cts.	\$
Harry Bate	300	do 13..	254	20	32	8 do do
Gatineau	300	do 14..	293	23	44	8 Side-wheel; passenger.
Chaffey	50	do 14..	42	3	36	5 Screw; passenger.
Garnet	242	do 14..	98	7	84	5 Side-wheel; passenger.
C. Anderson	100	do 14..	105	8	40	8 Screw; passenger.
Chipmonk (yacht)		do 16..	20	1	60	5 do yacht.
W. F. Logie		do 20..	17	1	36	5 do tug.
Georgiana		do 21..	53	4	24	5 do do
Sovereign	500	do 21..	637	50	96	8 Side-wheel; passenger.
Calumette		do 23..	40	3	20	5 Screw; tug.
W. H. Nasmith		do 24..	49	3	92	5 do do
J. R. Booth		do 25..	132	10	56	5 do do
Silver Spray		do 26..	130	10	40	5 do do
W. C. Francis		July 4..	37	2	96	5 do do
Florence		do 4..	62	4	96	5 do do
St. Louis		do 7..	34	2	72	5 do do
Shanly (Government)		do 8..				do do
John A.		do 9..	19	1	52	5 do do
Mountain Maid	250	do 9..	118	9	44	8 Side-wheel; passenger.
Lady of the Lake	700	do 9..	607	48	56	8 do do
May Flower		do 10..				Screw do
H. Bonnefant	25	do 15..	22	1	76	5 Stern-wheel do
Alexandria (yacht)		do 19..	53	4	24	5 Screw; yacht.
St. Peter		do 21..	43	3	44	5 do tug.
Reliance	50	do 23..	78	6	24	5 Side-wheel; passenger.
Greetlands	80	do 24..	1,091	87	28	8 Screw; freight and passenger.
Agnes	50	do 28..	29	2	32	5 Screw; passenger.
Eva	25	do 28..	6	0	48	5 do do
High Rock		do 28..	7	0	56	5 do tug.
River Bell		do 28..	7	0	56	5 do do
Montmorency		do 28..	18	1	44	5 do do
Kate		do 28..	23	1	84	5 do do
Rockland		do 29..	78	6	24	5 do do

STEAM Vessels Inspected for the Year, &c.—Montreal Division—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.		Remarks.
		1891.		\$ cts.	\$	
Aid.....		do 29..	25	2 00	5	Stern-wheel; tug.
Mouche à Feu.....	50	do 29..	20	1 60	5	do passenger.
Bonito.....	30	do 29..	17	1 36	5	Screw do
Glide.....	100	do 30..	80	6 40	5	do do
John.....	50	do 30..	35	2 80	5	Stern-wheel do
Charlotte.....	100	do 30..	59	4 72	5	Screw; tug.
Belmont.....		Aug. 1..	133	10 64	8	Side-wheel; passenger.
Argo.....		do 12..	154	12 32	5	do tug.
Dora.....	50	do 12..	48	3 84	5	Screw; passenger.
Meteor.....	75	do 12..	132	10 56	8	do do
D. A. Martin.....		do 13..	47	3 76	5	do do
Clyde.....		do 13..	29	2 32	5	do do
Toneata.....	25	do 13..	14	1 12	5	do do
Emerillion.....	25	do 14..	15	1 20	5	do do
Lotta.....		do 14..				do do
Charlotte.....	50	do 14..	14	1 12	5	do do
Mattawan.....	50	do 14..	22	1 76	5	do do
D. McLaughlin.....		do 15..	22	1 76	5	do tug.
Bonavista.....	50	do 20..	1,306	104 48	8	do freight and passenger.
Percy.....		do 20..	7	0 56	5	do tug.
Rigeaud.....		do 26..	46	3 68	5	do do
Maggie R. King.....		Sept. 1..	27	2 16	5	do do
H. M. Mixer.....		do 8..	21	1 68	5	do do
Hall.....	300	do 9..	247	19 76	8	do freight and passenger.
Dandy.....		do 11..	46	3 68	5	Screw; tug.
Shickluna.....		do 19..	66	5 28	5	do do
St. Anne.....		do 23..	25	2 00	5	do do
Plover.....		do 23..	43	3 44	5	do do
Cacouna.....		do 25..	1,451	116 08	8	do freight.
Gertie.....		Oct. 6..	17	1 36	5	do tug.
Monarque.....		do 9..	136	10 88	5	Side-wheel; tug.
Tim Doyle.....		do 13..	20	1 60	5	Screw; tug.
Wm. Paul.....		do 15..	7	0 56	5	do do
Totals.....			19,135	1,530 80	708	

JOHN BURGESS, *Steamboat Inspector.*

STEAM VESSELS not Inspected for the Year ended 31st December, 1890.

MONTREAL DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks.
				Why not Inspected and Class of Vessel.
			\$ cts.	
Grain Elevator No. 4	188	118	....	Not employed.
do 1.....	165	102	....	do
do 5	151	91	....	do
do 8.....	178	112	....	do
do 2.....	172	104	..	do
Nama (yacht)	30	.....	7 40	Laid up before inspected.
Islmay do	7	....	....	Inspection not applied for.
Transfer	619	395	....	Not employed.
Danhireda	46	31	....	Laid up before inspected.
Castor	54	35	....	Not employed.
Powerful.....	254	160	....	do
J. K. Ward.....	23	15	....	Uncertain if in this division.
G. H. Millen.	11	7	....	Laid up before inspected.
Sandy.....	29	20	....	Time not up.
Total	1,927	1,190	7 40	

JOHN BURGESS,
Steamboat Inspector.

STEAM Vessels Inspected for the Year ended 31st December, 1890.

QUEBEC DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1890.		\$ cts.	
Berthier	700	Nov. 25.....	1,100	96 00	Paddle, passenger, Three Rivers and Montreal.
Sorel.....	300	do 25.....	158	20 64	do Sorel and Montreal.
Terrebonne.....	450	do 25.....	601	56 08	do do
Polino.....	60	Dec. 25.....	807	72 56	Screw, freight, and passenger, Montreal and St. John, Nfld.
C. J. Bridges.....	Crew only...	P.W. Dept.....			Screw, tug.
M. F. Pearson	do ..	do			do
St. Paul.....	do ..	do			do
St. James.....	do ..	do			do
Chambly.....	600	Nov. 25.....	647	59 76	Paddle, passenger, Chambly and Montreal.
Cultivateur.....	700	do 25.....	694	63 52	do Sorel do
Francis.....	Crew only...	P.W. Dept.....			Screw, tug.
Delisle	do ..	do			do
Trois Rivières.....	1,000	Nov. 25.....	1,710	144 80	Paddle, passenger, Quebec and Montreal.
Ida.....	100	do 25.....	163	21 04	Screw, passenger, Chambly and Montreal.
Mouche à Feu.....	300	do 25.....	214	25 12	Paddle, passenger, Sorel and Berthier.
Montreal.....	800	do 25.....	2,211	184 88	do Quebec and Montreal.
John Young	Crew only...	do 25.....	163	18 04	Paddle, tug do
Hope.....	do ..	do 25.....	305	29 40	do do
South	450	do 25.....	349	35 92	Paddle, ferry, Lévis and Quebec.
North	450	do 25.....	289	31 12	do do
Miramichi.....	300	do 25.....	727	66 16	Paddle, passenger, Pictou and Montreal.
Lord Stanley	Crew only...	Dec. 25.....	276	27 08	Screw, tug, Gulf and Montreal.
Jacques Cartier.....	do ..	Nov. 25.....	143	19 44	Paddle, tug, Quebec and Montreal.
Florence	do ..	do 25.....	113	14 04	Screw, tug, Gulf do
C. W. Jones.....	do ..	do 25.....	38	8 04	do Quebec do
Union.....	773	Oct. 20.....	687	62 96	Paddle, passenger, Chicoutimi and Quebec.
Rivière du Loup.....	150	Nov. 25.....	173	21 84	do Varennes & L'Assomption.
Laprairie.....	997	do 25.....	523	49 84	Paddle, ferry, Montreal and Laprairie.
Rodolphe.....	Crew only...	do 25.....	116	17 28	Paddle, tug, Sorel and Pierre Ville
Canadien.....	60	do 25.....	26	7 08	Screw, passenger, Sorel & Lanoraie
Lake.....	Crew only...	do 25.....	145	16 60	do tug, Gulf and Montrea

STEAM Vessels Inspected, &c.—Quebec Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1890.		\$ cts.	
Aurelia.....	Crew only..	Nov. 25.....	32	7 56	Screw, Quebec Harbour, tug.
Activity.	do ..	Dec. 25.	15	6 20	do do
Otter.....	123	do 1.....	219	25 52	do passenger, Quebec and Natashquan.
Victor.....	Crew only..	do 1.....	35	7 80	do Quebec Harbour, tug.
Beaver.....	do ..	Nov. 25 . . .	273	26 84	Paddle, tug, Gulf and Montreal.
William	do ..	Stranded before dues paid.			
Blandford	do ..	Nov. 25	65	10 20	do Quebec do
Fairy	do ..	do 25.....	26	6 28	Screw, Quebec Harbour, tug.
Ida.....	do ..	do 25.....	26	7 08	do do
St. Croix.....	541	do 25	445	43 60	Paddle, passenger, Ste. Croix and Quebec.
Pilgrim.....	455	do 25.....	262	28 96	do St. Nicholas and Quebec.
Olivia Gordon.....	Crew only..	do 25.....	36	7 88	Screw, river tug.
Brothers	526	do 25	262	28 96	Paddle, passenger, St. Ann and Quebec.
Hubert Larkin....	Crew only..	do 25.....	49	8 92	Screw, Quebec Harbour, tug.
Stormy Petrol.....	do ..	do 25.....	11	5 88	do do
Swallow.....	do ..	do 25.....	9	5 72	do do
Marie Louise.....	do ..	do 25.....	99	12 92	Paddle, tug, Bersimist River.
Champion.....	do ..	do 25.....	185	19 80	Screw, tug, Gulf and Montreal.
Rhoda	do ..	do 25.....	182	19 56	Paddle do
May Flower.....	do ..	do 25.....	13	6 04	Screw, Quebec Harbour, tug.
C. Holiwell.	do ..	do 25.....	9		do do
Osprey	do ..	do 25.....	10	5 80	do do
Hope.	do ..	do 25.....	20	6 60	do do
Margaret.....	do ..	do 25.....	67	10 36	do do
McNaughton.....	do ..	Dec. 25.....	137	15 96	Screw, tug, Gulf and Montreal.
Montmagny.....	450	Nov. 25.....	361	36 08	Paddle, passenger, Berthier and Quebec.
Dan.....	100	do 25.....	56	9 48	Screw, passenger, Lake and Rivers
Bohemian	500	do 25.....	1,138	99 04	Paddle, passenger, Cornwall and Montreal.
Magnet.....	625	do 25.....	1,029	90 32	do St. Ann & Montreal.
Asilda.....	Crew only..	do 25.....	24	6 92	Screw, river tug.
W. Ross	do ..	do 25.....	14		do do
James.....	do ..	do 25.....	127	15 16	Paddle do

STEAM Vessels Inspected, &c.—Quebec Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1890.		\$ cts.	
Flora.....	do ..	do 25.....	50	9 00	Screw do
Mersey.....	Crew only..	Nov. 20 ..	60	9 80	Screw, tug, Quebec Harbour.
Florence (schooner)	do ..	Dec. 20.	133	15 64	do do Gulf.
J. R. Souter.....	do ..	do 20	11	5 88	do do Harbour.
Five Brothers.....	do ..	do 20	10	5 80	do do do
Orleans.....	475	do 20.....	181	22 48	Screw, ferry, Quebec and Island of Orleans.
Randolph.....	Crew only..	do 20.....	16	6 28	Screw, tug, Quebec Harbour.
H. C. Curtis.....	do ..	do 20 ..	36	7 88	do do
Honke Dore.....	do ..	do 20	5	5 40	do do
St. Louis.....	551	Nov. 25.....	428	42 24	Paddle, passenger, Quebec and St. Jean Deschaillons.
Etoile.....	591	do 25.....	560	52 80	Paddle, passenger, Quebec and St. Jean Deschaillons.
St. George.....	Crew only..	do 25.....	13	6 04	Screw, tug, Quebec Harbour.
St. Roch.....	do ..	do 25.....	18	6 44	do do
Two Brothers.....	do ..	do 25.....	23	6 84	do do
Richelieu.....	100	do 25.....	33	7 64	Screw, pass., Belœil & Montreal.
Passport.....	400	do 25.....	1,034	90 72	Paddle, pass., Toronto & Montreal
Algerian.....	400	do 25	914	81 12	do do
Corinthian.....	400	do 25..	1,062	92 96	do do
Quebec.....	800	do 25.....	3,056	252 48	do Quebec & Montreal
Johanna B.....	Crew only..	Out only once.	17	.....
Vega.....	250	do ..	132	18 56	Screw, passenger, Quebec & St. Romuald.
L'Ami.....	Crew only..	do ..	16	6 28	Screw, tug, Quebec Harbour.
Levis.....	350	do ..	156	20 48	do pass., Quebec, St. Romuald
Potaris.....	400	June 10.....	533	50 64	do winter ferry, Quebec.
Canada.....	Crew only..	.....	239	.....
Rival.....	do ..	1890. Nov. 25	125	15 00	Paddle, tug, Quebec and Lake.
Diver.....	do ..	do 25	86	11 88	Screw, wrecking in Gulf.
Newfoundland.....	do ..	1891. June 20.....	918	78 44	do freight, Montreal and Coast
Contest.....	150	1890. Nov. 25.....	262	28 96	Paddle, mail tender, Rimouski.
Anglesea.....	Crew only..	do 25.....	153	17 24	do tug, Bic and Montreal.
Canada.....	500	do 25.....	2,009	168 72	do passenger, Quebec and Chicoutimi.
Ed. Arpin.....	25	do 25.....	5	5 40	Screw, pleasure yacht, Sorel.

STEAM Vessels Inspected, &c.—Quebec Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Acadian.....	Crew only..	June 20 .. 1890.	931	79 48	do freight, Montreal & coast.
Dauntless.....	do ..	Dec. 25.....	81	11 48	do tug, Gulf and Montreal.
Almanda.....	do ..	do 26	11	5 88	do tug, Qubec Harbour.
Dama	40	do 25.....	55	9 40	do pleasure yacht, Quebec and Montreal.
Lizzie.....	Crew only..	Burned down before due s paid. 1891.			
Albani	do ..	July 19..... 1890.	58	9 64	Screw, pleasure yacht, Kingston.
Victory.....	do ..	Nov. 20	42	8 36	do tug, Pabos River.
Pilot.....	350	July 21	426	42 08	do winter ferry, Quebec.
Lady Belleau.....	Crew only..	Dec. 25.....	81	11 48	do wrecking in Gulf.
Conqueror	do ..	Nov. 25	233	23 64	Paddle, tug, Gulf and Montreal.
Ida.....	do ..	do 25.....			Screw, pleasure yacht, Lake St. Joseph.
Swan.....	do ..	do 25.....	8	5 64	Screw, pleasure yacht, Lake Edward.
Ema	do ..	do 25.....			Screw, pleasure yacht, Lake St. John.
Paribonka	do ..	do 25.....	144		Paddle, tug, Lake St. John.
Undine.	do ..	do 25.....	17		Screw do
Bourgeois.....	200	do 25.....	170	21 60	Paddle, ferry, Three Rivers & Lava
Glorias.....	145	June 1..... 1890.	109	16 72	Screw do do
Arthur.....	Crew only..	Nov. 25.....	33		Paddle, tug do
Robert Stoker....	do ..	do 25.....	14		Screw do
Como.	100	do 25.....	75	11 00	Paddle, ferry, Three Rivers and Nicolet.
St. George	Crew only..	do 25.....			Paddle, tug, Nicolet.
St. Olaf.....	150	Dec. 25.....	305	32 40	Screw, pass., Pictou & Magdalen.
Admiral	350	Nov. 25	682	62 56	Paddle, pass., Dalhousie & Gaspé
Vulcan.	40	do 25.....	22	6 76	Screw, ferry, Dalhousie and Magwash.
Frances	60	do 25.....	19	6 52	Paddle, ferry, Campbellton and Cross Point.
Oak Bay.....	Crew only..	do 25.....	29½	7 56	Paddle, tug, Campbellton.
Christiana	do ..	do 25.....	57	9 36	Paddle, tug.
Maggie H.....	do ..	do 25.....		5 00	Screw, do
Albion.....	do ..	do 25.....	7	5 56	do pleas. yacht, Lake Megantic
L'Isle aux Noix....	do ..	do 25.....	20	6 60	do do do
Lena.....	do ..	do 25.....	22		do do do
Vesta.....	do ..	do 25.....	4	5 32	do do Three Rivers.

STEAM Vessels Inspected, &c.—Quebec Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Queen.....	350	June 1.....	367	37 36	Screw, winter ferry, Quebec.
Forest.....	Crew only..	1890. Nov. 25.....	26	7 08	do tug, Chicoutimi River
Thor.	do ..	do 25.....	322	30 76	Paddle, tug do
Cou Koo..	do ..	do 25.. ..	6	5 48	Screw, tug do
Kinogami.....	do ..	do 25.....	21	6 68	do do
Dot.....	do ..	do 25.....	10	5 80	do do
Chicoutimi.. . . .	do ..	do 25.....		5 00	do do
Bella.	do ..	do 25.....	51	9 08	do do
Batiscan.....	do ..	do 25.....	40	8 20	Paddle, tug, Batiscan River.
Sorel Boy.	do ..	do 25.....	5	5 40	Screw, tug, Quebec Harbour.
Maud	do ..	do 25.....	54	9 32	Paddle, tug, Three Rivers.
Lucie.....	do ..	do 25.....	24	.....	do do
Total.....			31,044	3,433 92	

JOS. SAMSON,
Steamboat Inspector.

STEAM Vessels not Inspected for the Year ended 31st December, 1890.

QUEBEC DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks.
				Why not Inspected and Class of Vessel.
Hercules.....	200	125	Not paid....	Side-wheel, tug ; laid up.
Lady Dufferin.....	5	3	do ...	Screw, tug, Quebec Harbour ; laid up.
Relief.....	381	193	do ...	do wrecking in Gulf ; laid up.
Bienvenu.....	648	373	do	Side-wheel, passenger do
Maggie Bell.....	372	226	do	do tug ; laid up.
Cité.....	52	33	do	do do
Patrick Murphy.....	10	4	do	Screw, tug, Quebec Harbour ; laid up.
Total	1,668	957		

JOS. SAMSON,
Steamboat Inspector.

STEAM Vessels Inspected for the Year ended 31st December, 1890.

QUEBEC AND MONTREAL DIVISION.

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1890.		\$ cts.	
Chambly.....	600	Nov. 25....	647	59 76	Paddle, passenger, Montreal and Chambly.
Trois Rivières....	1,000	do 25....	1,710	144 80	do do do Three Riv
Cultivateur.....	700	do 25....	694	63 52	do ferry, Montreal and Island St. Helen.
Terrebonne.....	450	do 25....	601	56 08	Paddle, passenger, Montreal and Sorel.
Berthier.....	700	do 25....	1,100	96 00	do do do Three Riv
Montreal.....	800	do 25....	2,211	184 88	do do do Quebec.
Goul.....	300	do 25....	158	20 64	do ferry, Sorel and Berthier.
Ida.....	100	do 25....	247	27 76	do passenger and freight, Montreal and Chambly.
Polino.....	60	Dec. 25....	807	72 56	Screw, passenger and freight, Montreal and St. John, Nfld.
Ed. Arpin.....	25	Nov. 25....	5	5 40	Screw, pleasure yacht, Montreal and Chambly.
Rivière du Loup...	150	do 25....	173	21 84	Paddle, ferry, Varennes and l'Assomption.
Mouche-à-feu.....	300	do 25....	214	25 12	do passenger, Montreal and Sorel.
Longueuil.....	889	do 25....	365	37 20	do ferry, Hochelaga and Longueuil.
Miramichi.....	300	do 25....	727	66 16	do passenger, Montreal and Pictou.
Canadien.....	60	do 25....	26	7 08	Screw, passenger, Sorel and Lanoraie.
North.....	450	do 25....	289	31 12	Paddle, ferry, Quebec and Lévis.
South.....	450	do 25....	349	35 92	do do
Maud.....	350	do 25....	269	29 52	Paddle, passenger, Montreal and Carillon.
Princess.....	443	do 25....	579	54 32	do do
Bohemian.....	500	do 25....	1,138	99 04	Paddle, passenger, Montreal and Cornwall.
Dan.....	100	do 25....	56	9 48	Screw, ferry, Toronto and Long Branch.
Brothers.....	526	do 25....	262	28 96	Paddle, passenger, Quebec and St. Ann.
Etoile.....	591	do 25....	560	52 80	do Quebec and St. Jean Deschaillon.
St. Louis.....	541	do 25....	428	42 24	Paddle, passenger, Quebec and St. Jean Deschaillon.
Pelerin.....	455	do 25....	262	28 96	Paddle, passenger, Quebec and St. Nicholas.
Otter.....	123	Dec. 1....	219	25 52	Screw, passenger and freight, Quebec and Gulf Ports.
Montmagny.....	450	Nov. 25....	351	36 08	Paddle, passenger, Quebec and Berthier, below.
St. Croix.....	541	do 25....	445	43 60	Paddle, passenger, Quebec and St. Croix.
Union.....	773	Oct. 20....	687	62 96	do Quebec and Chicoutimi.
Richelieu.....	100	Nov. 25....	33	7 64	Screw, passenger, Montreal and Belœil.
Algerian.....	400	do 25....	914	81 12	Paddle do do and Toronto.

STEAM Vessels Inspected &c.—Quebec and Montreal Division—*Continued.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1890.		\$ cts.	
Passport.....	400	do 25....	1,024	89 92	do do do do
Corinthian.....	400	do 25....	1,062	92 96	do do do and St. Ann de
Magnet.....	625	do 25....	1,029	90 32	Beaupré. Paddle, passenger, Montreal and St. Ann de
Orleans.....	475	do 25....	181	22 48	Beaupré. Screw, ferry, Quebec and Island of Orleans.
Quebec.....	800	do 25....	3,056	252 48	Paddle, passenger, Quebec and Montreal.
Lévis.....	350	do 25....	156	20 48	Screw, ferry, Quebec and St. Romuald.
Vega.....	250	do 25....	132	18 56	do do
South Eastern.....	700	June 1.... 1891.	395	39 60	Screw, passenger transfer, Prescott and Kingston.
Filgate.....	500	Nov. 25.... 1890.	263	29 04	Paddle, passenger, Montreal and Beauharnois.
Garnet.....	242	do 25.... 1891.	98	12 84	Paddle, passenger, Montreal and Valleyfield
Greetlands.....	80	June 13.... 1891.	1,091	95 28	Screw, passenger and freight, Montreal and foreign ports.
Coban.....	40	do 1.... 1890.	1,063	93 04	Screw, passenger and freight, Montreal and foreign ports.
Prince of Wales...	500	Nov. 25.... 1891.	610	56 80	Paddle, passenger, Montreal and Carillon.
Cacouna.....	Freight.	June 25.... 1890.	1,451	124 08	Screw, freight, Montreal and foreign ports.
Contest.....	150	Nov. 25....	231	26 48	Paddle, mail tender, Rimouski.
Canada.....	500	do 25....	2,009	168 72	do passenger, Quebec and Chicoutimi.
LeCultivateur.....	100	do 25....	152	20 16	Centre Wheel, ferry, Verdun and Côte St. Catherine.
Reliance.....	50	do 25....	78	11 24	Paddle, ferry, Lachine and Caughnawaga.
Mansfield.....	50	do 25....	121	17 68	Screw, ferry, New Edinburgh and Gatineau Point.
Empress.....	800	do 25....	677	62 16	Paddle, passenger, Ottawa and Grenville.
1000 Island Ram'er	50	do 25....	20	6 60	Screw, ferry, Ottawa and Hull.
E. G. Laverdure ..	100	do 25....	54	9 32	do pleasure yacht, Ottawa River.
Pearl.....	25	do 25....	5	5 40	do do do
Birdie Jones	22	do 25....	2	5 16	do do do
Jenet Craig.....	50	do 25....	12	5 96	do ferry, Sand Point and Bristol.
Ed. Davis.....	25	do 25....	37	7 96	Paddle, ferry, Quyon and Moorsland.
Agnes.....	50	do 25....	29	7 32	do Buckingham and Grand Rapids
Eva.....	25	do 25....	6	5 48	do do do
Bonito.....	30	do 25....	17	6 36	do Calumet and L'Original.
Glide.....	100	do 25....	80	11 40	do do and Hawkesbury.
Mouche à Feu.....	50	Nov. 25....	20	6 60	Centre-wheel, ferry, Thurso and Clarence.
John.....	50	do 25....	35	7 60	do Carillon and Pt. Fortune.

STEAM Vessels Inspected, &c.—Quebec and Montreal Division—*Continued.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and inspection Fee Paid.	Remarks.
		1890.		£ cts.	
Sovereign.....	700	do 25...	637	58 96	Paddle, passenger, Montreal and Carillon.
Mountain Maid....	250	do 25 ...	118	17 44	do Newport and Magog.
Lady of the Lake..	700	do 25...	607	56 56	do do
Mayflower.....			18	6 44	Screw, pleasure yacht, Lake Massawippi.
Chaffey.....	50	Nov. 25...	42	8 36	do ferry, Valleyfield and Lancaster.
Olive.....	225	do 25...	213	25 04	do passenger and freight, Montreal.
Bonenfant	25	do 25...	22	6 76	Centre-wheel, ferry, Charlemagne and Bout de l'Isle.
Dama.....	40	do 25...	54	9 32	Screw, pleasure yacht, Montreal and Quebec
St. Olaf.	150	do 25 ...	305	32 40	do pass. and freight, Pictou and Gulf Ports.
Hugo.....	Freight.	do 25...	154	17 32	Paddle, freight, Lake Temiscamingue.
Meteor	150	do 25...	132	18 56	Screw, passenger do
Dora	50	do 25...	48	8 84	do do
Clyde.....	60	do 25...	29	7 32	do do
Toneata.....	35	do 25...	14	6 12	do do
Emerillon.....	25	do 25...	15	6 20	do do
Mattawan	60	do 25...	22	6 76	do do
John Fraser.	100	do 25...	115	17 44	do Lake Nipissing.
Bonavista.	50	June 1 1891.	1,306	112 48	do and freight, Montreal and Gulf Ports.
Belmont.....	100	Nov. 25 1890.	133	18 64	Paddle, passenger, Lachine and Ottawa.
Glacial.....	145	June 1 1891.	109	16 72	Screw, ferry, Three Rivers and Ste. Angèle.
Bourgeois.	200	Nov. 25 1890.	170	21 60	Paddle do do St. Gregoire
Como.....	100	do 25...	75	11 00	do do do Nicolet.
Admiral.....	350	do 25...	682	62 56	do passenger, Dalhousie and Gaspé.
Frances.....	60	do 25...	19	6 52	do ferry, Campbellton and Cross Point.
Jacques Cartier....	400	do 25...	143	19 44	do passenger, Quebec and St. Ann.
Laprairie	997	do 25...	523	49 84	do ferry, Montreal and Laprairie.
Hochelaga	775	do 25...	419	41 52	do do Hochelaga.
Charlotte.....	50	do 25...	14	6 12	Screw, passenger, Lake Temiscamingue.
Acadian	Freight.	June 9 1891.	931	79 48	do freight, Montreal and Gulf Ports.
Newfoundland	do	do 20...	918	73 44	do do do
Polaris.....	400	Sept. 30...	533	50 64	do winter ferry, Quebec and Lévis.
Pilot.....	350	do 30...	426	42 08	do do do

STEAM Vessels Inspected, &c.—Quebec and Montreal Division—*Concluded.*

Name of Vessel.	Number of Passengers allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and inspection Fee Paid.	Remarks.
		1890.		£ cts.	
Queen	350	do 30....	367	37 36	do do do
Gatineau.....	300	Nov. 25....	293	31 44	Paddle, passenger, Montreal and Valleyfield
Hall	300	do 25....	247	27 76	Screw do Ottawa.
Vulcan	40	do 25....	22	6 76	do ferry, Dalhousie and Florent Point.
Albion..	20	do 25....	7	5 56	do pleasure yacht, Lake Megantic.
Lena.			20	Not paid.	do do do
Lottie			10	do	do passenger, Lake Temiscamingue.
St. Louis.			Not meas'd.	do	do do Grande Pile and La Tuque
Ida			do	do	do ferry, Lake St. Joseph.
Swan..			8	5 64	do pleasure yacht, Lake Edward.
Undine..			17	Not paid.	do do Lake St. John.
Peribonca.....			145	do	Paddle, passenger do
Ema.			Not meas'd.	do	Screw, pleasure do
D. A. Martin.....			do	do	do tug, Lake Nipissing.
Total.....			41,630	4,029 20	

PIERRE D. BRUNELLE,
Hull Inspector.

STEAM Vessels not inspected for the Year ended 31st December, 1890.

QUEBEC AND MONTREAL DIVISION.

Name of Vessel.	Gross Tonnage	Registered Tonnage.	Dues and Fees.	Remarks.
Rocket.. .. .	590	329	.....	Not employed.
Adirondac	12	8	.....	Could not find her whereabouts.
Bienvenu	647	373	.....	Not employed.
Johanna B.	17	9	.....	do
Almeric.	Not measured.		.....	do
Dagmar... .. .	405	245	.....	do
Maria Louise.	99	62	.....	Did not carry passengers this year.
Powerful	254	160	.....	Not employed.
Rover. .... .			.....	Did not carry passengers this year.
Sorel Boy.	11	8	.....	do do
Walter B.	28	20	.....	Not employed.
Ottawa.	116	99	.....	Inspected by Mr. Donnelly this year.
Canada Atlantic Transfer.	618	395	.....	Not employed.
C. Anderson	105	64	.....	Aground in the rapids below Lake Francis.
Thames.	1,684	1,064	.....	Not in my district this year.

PIERRE D. BRUNELLE,
Hull Inspector.

STEAM Vessels Inspected during the Year ended 31st December, 1890.

MARITIME PROVINCES DIVISION.

Name of Vessel.	Number of Passen- gers Allowed	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Remarks.
		1891.		8 cts.	
Princess Beatrice.....	45	Jan. 6 1890.	414 18	43 84	Screw, freight, passenger.
Halifax.....	400	Oct. 15 1891.	1738 45	77 52	do do
Yarmouth.....	350	Jan. 29 1891.	1432 16	65 28	do do
Harlaw.....	75	Feb. 5 1891.	451 36	44 08	do do
Rescue.....		do 5 1891.	124 09	14 92	do tug, wrecker.
Alpha.....	80	do 20 1890.	306 91	32 48	do freight, passenger.
La Tour.....	75	Dec. 15 1891.	154 43	20 32	do do
Marina.....		Feb. 19 1891.	32 46	7 56	do tug, fish.
Island Gem.....		do 21 1890.	15 62	6 28	do fish boat.
Electra.....	75	Dec. 1 1891.	106 96	16 56	do freight, passenger.
Dominion.....	175	Mar. 12 1890.	594 08	55 52	do do
City of St. John.....	150	Dec. 1 1891.	709 12	64 72	Paddle do
Ralph, E. S.....		Mar. 18 1890.	27 82	7 24	Screw, fish smack.
Goliath.....		July 1 1891.	146 83	16 76	do passenger.
A. C. Whitney.....		April 2 1890.	62 67	10 04	do tug.
Beaver.....	70	Dec. 10 1891.	146 86	19 68	do freight, passenger.
Hercules.....		April 29 1891.	87 11	11 96	do tug.
Arcadia.....	75	do 9 1890.	61 64	9 96	do ferry, passenger.
Lillie Glasier.....		do 15 1891.	209 31	21 72	Paddle, tug.
Ada G.....		do 15 1891.	102 08	13 16	do
Admiral.....		do 15 1891.	158 20	17 64	do
Hero.....		do 15 1890.	127 60	15 16	do
Bellisle.....	100	Dec. 10 1891.	155 44	20 40	Stern wheel, passenger.
Star.....	300	do 10 1891.	461 03	44 88	Paddle, freight do
Captain.....		April 16 1891.	68 43	10 44	Screw, tug.
General.....		do 16 1890.	159 09	17 72	Paddle do
May Queen.....	300	Dec. 10 1891.	539 40	51 12	do passenger.
Champion.....	100	April 28 1891.	190 14	20 20	do tug.
Maggie M.....		do 29 1890.	65 78	10 20	Screw do
Clifton.....	150	Dec. 12 1891.	138 21	19 04	Stern wheel, passenger.
St. John.....		April 30 1891.	47 28	8 76	Screw, tug.

STEAM Vessels Inspected, &c.—Maritime Provinces Division—*Continued.*

Name of Vessel.	Number of Passen- gers Allowed	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Remarks.
		1891.		\$ cts.	
G. D. Hunter		do 30	67·97	10 36	do
David Weston	480	Dec. 10	765·15	69 20	Paddle, passenger.
Neptune		1891. April 30	71·15	10 68	Screw, tug.
W. E. Vroom	24	do 15	10·05	5 80	do ferry, passenger.
Soulanges	250	1890. Dec. 10	318·87	33 44	Paddle, passenger.
City of Monticello	350	1891. Mar. 27	1053·65	90 64	do do
Enterprise	40	May 2	72·33	10 76	do ferry, passenger.
Bessie and Harry		do 6	22·00	6 76	Screw, water boat.
Chebucto	280	April 29	108·33	16 64	Paddle, ferry, passenger.
Mic-Mac	330	do 28	150·63	20 00	do do
Dartmouth	750	do 28	311·23	32 88	do do
Sir C. Ogle	250	do 28	126·06	18 08	do do
Salvor		May 7	44·93	8 60	Screw, wrecker.
Scotia		do 8	41·58	8 36	do tug.
Bertha		do 9	29·79	7 32	do do
Avon	130	April 24	64·66	10 12	do passenger.
Acadia	150	do 29	74·21	10 92	do do
Hiawatha	300	do 25	229·19	26 40	do do
W. M. Weatherspoon	50	June 2	59·29	9 72	do do
Richd. Doane		May 15	70·46	10 60	do tug.
Winnie		do 15	12·46	5 96	do do
Fearless		do 15	16·20	6 28	do do
Tourist	25	1890. Nov. 15	11·78	5 88	do passenger.
Fannie		1891. May 16	33·44	7 64	do tug.
Frank C. Batt	40	do 21	32·90	7 56	do ferry, passenger.
Montague	250	do 22	129·55	18 32	Paddle do
William		do 23	210·02	21 80	Screw, freight.
Southport	300	do 24	239·72	27 80	Paddle, ferry, passenger.
Elfin	200	do 24	122·42	17 76	do do
Wm. Aitken		do 24	74·87	11 00	Screw, tug.
F. M. Batt		do 24	59·90	9 72	do
Princess of Wales	400	do 26	935·54	82 80	Paddle, passenger.

STEAM Vessels Inspected for the Year, &c.—Maritime Provinces Division—*Continued.*

Name of Vessel.	Number of Passen- gers Allowed	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Remarks.
		1891.		8 cts.	
St. Lawrence.....	500	do 26 .	845 63	75 60	do
Heather Belle.....	250	May 26.....	282 34	30 56	Paddle, passenger.
Eldon.....		do 26 .	37 91	8 04	Screw, tug.
Shannon.....		do 28.....	75 11	11 00	do do
Daisy.....		do 28.....	10 74	5 80	do do
Alice.....	20	April 5.....	15 77	6 28	do ferry, passenger.
Winnie.....		May 29.....	3 00	5 24	do tug.
Zuleika.....		June 4.....	12 38	5 96	do yacht.
L. Boyer.....		do 7.....	60 00	9 80	do tug.
Chester.....		do 9.....	79 50	11 32	do do
Fred. Clinch.....		do 11.....	23 87	6 84	do do
Novelty.....		do 12.....	42 66	8 36	Paddle, tug.
Derigo.....		do 12.....	70 13	10 60	Screw do
Ada.....		do 13.....	3 66	5 32	do yacht.
Eva Johnston.....		do 13.....	15 77	6 28	do tug.
Fanchon.....		do 13.....	38 34	8 00	Stern-wheel, tug.
Florenceville.....	270	do 13.....	185 14	22 80	do passenger.
Bismarck.....		do 14.....	49 04	8 92	Paddle, tug.
Melbourne.....		do 14.....	4 00	5 32	Screw do
Sybella H.....	160	do 16.....	70 68	10 60	Paddle, ferry.
Sarcelle.....		do 16.....	21 86	6 68	Screw, tug.
St. Nicholas.....	60	do 16.....	60 20	9 96	do passenger.
Grip.....		do 16.....	4 81	5 40	do tug.
Zulu.....		do 16.....	17 60	6 36	Paddle, tug.
Miramichi.....	60	do 17.....	75 18	11 00	Screw, passenger.
St. Andrew.....		do 17.....	76 64	11 08	do tug.
Mascott.....		do 17.....	70 50	10 60	do do
Nelson.....	100	do 18.....	64 34	10 12	do passenger.
St. George.....		do 18.....	160 57	17 80	Paddle, tug.
Wee Laddie.....		do 18.....	16 60	6 36	Screw do
Bridgetown.....		do 19.....	14 66	6 20	do do
Loyalist.....		do 19.....	17 57	6 44	Paddle do

STEAM Vessels Inspected for the Year, &c.—Maritime Provinces Division—*Continued.*

Name of Vessel.	Number of Passen- gers Allowed	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Remarks.
		1891.		\$ cts.	
Laura.....		do 19	13·55	6 12	Screw do
Derby		do 19	11·66	5 96	Paddle do
Bessie.....		do 19	5·18	5 40	Screw, fish, tug.
Lady Dufferin.....	75	do 19.....	47·78	8 76	Paddle, ferry, passenger.
Utopia		do 21.....	25·00	7 00	Screw, tug.
East Riding.....		do 23.....	85·55	11 88	Paddle do
Dorcas.....		do 24.....	215·34	22 20	Screw, freight.
Squirrel.....		do 22	13·11	6 04	do tug.
Henrietta.....		do 24.....	19·12	6 52	do do
St. Lawrence.....		do 25.....	50·82	10 20	do do
Victor.....		do 25.....	45·51	8 60	Paddle do
Arbutus.....	80	do 16.....	46·75	8 76	Screw, tug, passenger.
Alameda.....	20	Oct. 15 1890.	33·93	7 64	do passenger.
Weymouth.....	140	June 30 1891.	153·93	20 32	do do freight.
Freddie V		July 2	26·60	7 08	Screw, tug.
Norman.....		do 5.....	46·87	8 68	do do
Acadia	400	Dec. 12	621·44	57 68	Paddle, passenger.
Oscar Wilde.....	160	do 12.....	232·73	17 20	Stern-wheel, passenger.
Flushing.....	250	July 7	257·09	28 56	Screw, passenger, freight.
Quiddy	10	do 7.....	30·59	7 40	Paddle, passenger.
Lillie	15	July 1 1890.	71·64	10 76	Screw, tug.
Carroll	300	July 15 1891.	1,372·29	117 76	do freight, passenger.
Neptune.....	50	do 22	138·69	19 04	Paddle do do
Gipsy.....		do 22	16·70	6 36	Screw, tug.
Peerless	200	do 21.....	94·27	15 52	Paddle, passenger.
Elenor M. Cates.....		do 23.....	58·81	9 72	Screw, tug.
Merrimac.....		do 24.....	85·80	11 80	do do
M. & E. Rudderham.....		do 24	33·54	7 64	do do
Gladiator.....		do 24.....	70·40	10 65	do do
Lady of the Lake		do 25.....	61·10	9 88	Paddle, tug.
Marion	300	do 21.....	478·49	46 24	do freight, passenger.
Zaidee.....		do 25.....	18·63	6 44	Screw, tug.

STEAM VESSELS Inspected for the Year, &c.—Maritime Provinces Division—*Continued.*

Name of Vessel.	Number of Passen- gers Allowed	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Remarks.
		1891.		\$ cts.	
May Queen.....			142·09	19 36	Paddle, freight, passenger.
Magnolia.....	175	July 22.....	260·50	28 80	Paddle, ferry, passenger.
Lennox.....	100	do 22.....	66·29	10 28	do do
Mary Odell.....		do 30.....	22·55	6 84	Screw, fish boat.
Rimouski.....	70	do 22.....	124·70	18 00	do freight, passenger.
Delta.....	6	Aug. 6.....	871·21	72 84	do do
Robbie Burns.....		do 9.....	88·93	12 12	do steam lighter.
Highland Mary.....		do 9.....	73·73	10 92	Twin screw do
Arrow.....		do 8.....	10·02	5 80	Screw, yacht.
Annex.....	650	do 9.....	338·42	35 04	Paddle, ferry, passenger.
Joe Edwards.....	30	do 11.....	34·66	7 80	Screw, ferry.
Evangeline.....	135	do 11.....	78·74	11 32	do do
Maud.....		do 12.....	12·27	5 96	do tug.
David Duncan.....		do 12.....	20·59	6 68	do do
Yuba.....	15	do 14.....	12·04	5 80	do ferry.
St. Michael.....		do 18.....	39·20	8 12	do tug.
Molega.....		do 18.....	9·19	5 72	do passenger.
May Flower.....		do 19.....	5·92	5 48	do fish boat.
La Have.....		do 19.....	49·27	8 92	do tug.
Fairy.....		do 20.....	5·07	5 40	do tug, water.
Worcester.....	275	do 27.....	1332·56	114 64	do passenger, freight.
M. A. Starr.....		do 27.....	244·32	27 52	do freight.
Argus.....		Sept. 1.....	26·74	No fees.	do Gov. Rev. boat.
Storm King.....		do 9.....	107·87	13 56	do tug.
Kingsville.....		do 9.....	36·59	7 88	do do
Western Extension.....	336	do 10.....	424·00	41 92	Paddle, ferry, passenger.
Jessie A. Campbell.....		do 11.....	3·18	5 32	Screw, tug.
Mary Ann.....		do 12.....	25·38	6 00	do do
Clansman.....		do 13.....	23 00	6 84	do do
Lion.....		do 15.....	19·82	6 60	do do
Zantic.....			14·16	6 12	do do
Mascott.....		Sept. 22.....	22·88	6 84	do do

STEAM VESSELS Inspected for the Year, &c.—Maritime Provinces Division—*Continued.*

Name of Vessel.	Number of Passen- gers Allowed	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Remarks.
		1891.		\$ cts.	
Gambrunis		Oct. 9.	28·36	7·24	do lighter.
Bridgewater	200	Oct. 15. 1890. 1891.	207·79	24 64	do freight, passenger.
Egerton.			112·10	13 96	Paddle, ferry do
St. Pierre ..	60	Aug. 14.	496·44	47 68	Screw, freight do
Jessie Gray		Oct. 18 . . .	76·00		do lighter.
St. Lawrence.....			467·00		do Government dredge.
Canada					do do do
Dream.....			12·00		do do employ.
Henry Hoover . . .		Nov. 8.	55·64	9 40	do tug.
Boston	320	do 28.	1694·50	143 52	do passenger, freight.
Dream		Dec. 3.	44·51	8 52	do Government yacht.
Atlas.....		Not issued....	15·79	5 88	do tug.
Wanda S.....		do	10·44	5 88	do do
Total				3,139 57	

DOUGLAS STEVENS,
Steamboat Inspector.

STEAM VESSELS not Inspected for the Year ended 31st December, 1890.

MARITIME PROVINCES DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks. — Why not Inspected and Class of Vessel.
			\$ cts.	
Carrie	14·83	7·37	.....	Laid up ; tug.
New City,	78·38	53·20	.....	Out of port ; tug.
Ouanqoudy.	294·75	98·81	.....	Laid up for repairs ; ferry.
Pinafore	25·86	14·67	.....	Out of port ; passengers.
Meadow Flower.....	6·56	4·46	.....	Not yet inspected ; tug.
Peri	11·77	8·00	.....	do do
Stanley	914·00	395·00	.....	Not called for ; passengers.
Willoughby.....	6·44	3·87	.....	Laid up ; tug.
Alida	64·18	29·52	.....	do
St. Louis	4·97	3·38	.....	Out of district ; tug.
Water Boat.....	6·17	2·02	.....	Laid up ; water boat.
Geo. McKenzie.....	120·00	.....	.....	Not yet inspected ; Government dredge
Marguerite	19·66	12·30	.....	Laid up ; yacht.
Dolphin	12·78	8·69	.....	Not yet inspected ; lighter.
Henry Hoover.....	54·64	37·16	.....	do tug.
Leonora	5·00	.....	.....	do yacht.
Mayflower.....	377·00	169·00	.....	Laid up ; passengers.
Coila	325·45	161·79	.....	Not yet inspected ; freight.
Northern Light	396·00	234·00	.....	Laid up ; passengers.
Sea King	128·63	87·47	.....	Out of district ; tug.
Total	2,857·04	1,280·73		

DOUGLAS STEVENS,
Steamboat Inspector.

HALIFAX, N.S., 27th October, 1890.

STEAM Vessels Inspected for the Year ended 31st October, 1890.

MARITIME PROVINCES DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Alpha	80	Mar. 15.. 1890.	211	32 48	Passenger and freight.
Alameda	20	Oct. 15.. 1891.	33	7 64	do
Arcadia	75	April 7.. 1890.	61	9 96	Ferry service.
Acadia	400	Dec. 12.. 1891.	621	57 68	Passenger and freight.
Acadia	150	April 26..	74	10 92	do
Avon	130	do 26..	64	10 12	do
Alice	20	do 4..	15	6 28	Ferry service.
Arbutus	20	June 16..	46	8 76	do
Annex 2.	450	Aug. 17.. 1890.	338	35 04	do
Belleisle	150	Dec. 10..	155	20 40	Passenger and freight.
Beaver	70	do 16.. 1891.	146	19 68	do
Bridgewater.	200	Oct. 15.. 1890.	207	24 64	do
City of St. John. . . .	130	Dec. 1.. 1891.	709	56 72	do
Chebucto	280	April 4.. 1890.	108	16 64	Ferry service.
Clifton	150	Dec. 12.. 1891.	138	19 04	Passenger and freight.
City of Monticello. . .	350	Mar. 27.. 1890.	1,033	90 64	do
Carroll	300	Aug. 20.. 1891.	1,372	117 76	do
Coila.		Sept. 29..	341	34 00	Freight service.
Dominion	175	Mar. 12.. 1890.	594	56 52	Passenger and freight.
David Weston.	480	Dec. 10.. 1891.	765	69 20	do
Delta	6	Aug. 13..	873	77 84	do
Dartmouth	750	April 28..	331	32 88	Ferry service.
Enterprise	40	June 24..	92	10 76	do
Elfin	200	May 24..	122	17 76	do
Evangeline.	135	Sept. 23.. 1890.	78	11 32	Passenger and freight.
Electra	75	Dec. 1.. 1891.	106	16 56	do
Flushing	250	July 10..	257	28 56	do
Florenceville	270	June 13..	185	22 80	do
Frank C. Butt.	40	May 21..	32	7 56	Ferry service.
Goliah	50	June —..	146	16 76	do temporary, at Gut of Canso.
Heather Belle.	250	May 26..	282	30 56	Passenger and freight.

STEAM Vessels Inspected, &c.—Maritime Provinces Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Hiawatha	300	April 25..	229	26 40	Passenger and freight.
Harlaw	75	Feb. 14..	451	34 16	do
Halifax	400	Sept. 30..	1,738	147 04	do
Joe Edwards	30	Jan. 15..	34	7 80	Ferry service.
Lady Dufferin	75	June 19..	47	8 76	do
Lennox	100	July 22..	66	10 28	do
La Tour	75	Dec. 15..	152	20 32	Passenger and freight.
Montague	250	May 22..	129	18 32	Ferry service.
Micmac	330	April 28..	150	20 00	do
M. A. Starr		Aug. 28..	244	17 52	Freight service.
Mirimachi	60	June 18..	75	11 00	Passenger and freight.
Marian	300	July 21..	478	46 24	do
May Queen	330	Dec. 10..	539	51 12	do
Magnolia	175	July 22..	260	28 80	do
Nelson	100	June 18..	68	10 12	do
Neptune	50	July 22..	138	19 04	do
Oscar Wilde	160	Dec. 12..	232	26 56	do
Princess of Wales	400	May 26..	935	82 80	do
Peerless	200	July 21..	94	15 52	do
Princess Beatrice	45	Mar. 22..	448	43 84	do
Quiddy	10	July 7..	30	7 40	do
Rimouski	70	do 22..	124	18 00	do
Soulanges	250	Dec. 10..	318	33 44	do
Star	300	do 10..	461	44 88	do
Southport	300	May 24..	186	27 20	Ferry service.
Sir C. Ogle	200	April 28..	126	18 08	do
Sybella H.	160	June 18..	47	10 60	do
St. Pierre	60	Aug. 14..	496	47 68	Passenger and freight.
St. Lawrence	500	May 26..	846	75 60	do
St. Nicholas	60	June 18..	62	9 96	do
Tourist	25	Nov. 15..	12	5 88	do
Western Extension	336	June 9..	425	41 92	Ferry service.

STEAM Vessels Inspected, &c.—Maritime Provinces Division—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
William.		May 23..	210	21 80	Freight.
W. M. Weatherspoon..	50	June 2..	59	9 72	Passenger and freight.
W. E. Vroom.....	24	April 15..	10	5 80	Ferry service.
Weymouth.....	140	June 30..	153	20 24	Passenger and freight.
Worcester.....	275	Aug. 27..	1,332	114 64	do
Yuba.....	15	July 1..	12	5 80	Ferry service.
				2,141 74	

CHARLES R. COKER,
Dominion Inspector of Hulls, &c.

STEAM Vessels not Inspected for the Year ending 31st October, 1890.

MARITIME PROVINCES DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks.
				Why not Inspected and Class of Vessel.
			\$ cts.	
Dorcas	215	119	.....	Laid up.
Egerton	112	70	.....	Receiving new boiler.
Ouangondy	294	98	.....	do large repairs.
Yarmouth	1,432	745	.....	To receive large repairs.
May Queen	142	89	19 36	Receiving new boiler, &c.
	2,195	1,121	19 36	

CHARLES R. COKER,

Dominion Inspector of Hulls, &c.

STEAM Vessels Inspected for the Year ended 31st December, 1890.

MANITOBA, KEEWATIN AND NORTH-WEST TERRITORIES DIVISION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspe- ction Fees Paid.	Remarks.
		1891.		\$ cts.	
Couchiching.....		May 3..	105·42	13 40	Screw ; tug.
D. L. Mather.....		do 5..	103·32	13 24	do
Empress	100	do 5..	129·28	18 32	Twin screw ; passenger and freight.
Queen		do 5..	31·64	7 56	Screw ; tug.
Kennina	75	do 24..	41·86	11 36	do passenger.
Keewatin		do 7..	41·25	8 28	Screw ; tug.
Cruiser.....		do 7..	11·59	5 96	do
Algoma.....		do 10..	99·13	12 92	do
Chieftain		do 20..	40 00	8 20	do
Alma T.		do 21..	15·78	6 28	do
Caro		do 22..	14·47	6 12	do
Rover.....		do 27..	4·07	5 32	do
Mary Hatch		do 29..	121·18	14 68	do
Thistle.....		June 3..	23·33	6 84	Screw ; fishing tug.
Annie Mac.....	40	May 6..	25·22	7 00	do ferry (viz. Rat Portage and Keewatin.)
Victoria		June 16..	40·10	8 20	do tug
Antelope	300	do 20..	142·61	19 44	Paddle ; passenger ; excursion boat.
Glendevon	25	do 3..	104·05	16 32	Screw ; passenger and freight.
Harry Montgomery.....		do 24..	3·65	5 32	do fishing tug.
Aurora	80	May 1..	224·50	26 00	Paddle ; passenger and freight.
Millie Howell.....		June 25..	24·11	6 92	Screw ; fishing tug.
Ogema		do 30..	62·05	9 96	do tug.
Red River	35	do 14..	166·47	*18 28	do passenger and freight.
Colville.....	35	do 3..	164·41	21 12	Twin screw do
Highland Maid	60	July 8..	106·24	16 48	Screw do
Dryberry.....		do 22..	11·72	5 96	Screw ; tug.
Beaver.....		do 22..	34·15	2 72	do
Shamrock.....	40	do 25..	79 84	14 40	Screw ; passenger and freight.
Kakabeka.....	200	do 28..	112·67	17 04	do ferry.
Mary Ann		do 28..	86·00	11 88	do tug.
Kate Marks.....		do 28..	54·15	9 32	do tug.

STEAM Vessels Inspected, &c.—Manitoba, Keewatin and North-West Territories
Division—*Concluded.*

Name of Vessels.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Richmond.....		do 29..	14·32	6 12	do fishing tug.
Frank Perew.....		do 30..	43·02	8 44	Screw ; tug.
Three Friends.....		do 31..	97·35	12 76	do
Salty Jack		Aug. 1..	44·62	8 60	do
Saskatchewan.....		do 25..	336·84	34 96	Paddle ; freight.
Hazel.		do 29..	7·52	5 64	Screw ; fishing tug.
Miles ..		do 30..	63·04	10 04	do
			2,831·97	441 30	

* Error of \$3 in receipt of inspection and tonnage dues and fees.

EDMUND R. ABELL,
Steamboat Inspector.

STEAM Vessels not Inspected for the Year ended 31st December, 1890.

MANITOBA, KEEWATIN AND NORTH-WEST TERRITORIES DIVISION.

Name of Vessel.	Gross Tonnage.	Dues and Fees.	Remarks. Why not Inspected and Class of Vessel.
		\$ cts.	
Marquette.....	149·07	.....	Stern paddle ; not in use.
Ida.....	19·00	.....	Screw ; fishing boat.
Lady Ellen	19·00	6 52	da do failed to meet
Princess	531·00	.....	Paddle ; passenger ; not used.
Rambler.....	14·00	6 12	Screw ; tug ; failed to meet.
Percy Sutherland.....	34·00	7	do do
Ida.....	6·00	.....	do
Mountain Belle	0·90	5 08	Screw ; at Bow River ; pleasure yacht.
Alice Sprague	62·00	.....	Stern paddle ; not used.
*Athabasca	†	21 36	On the Athabasca River, Hudson Bay Co.
*Grahame.....	220·04	34 50	Stern paddle ; at Fort Chipewyan, N.W.T., Hudson Bay Co.
Marquis.....	475·00	.....	Stern paddle ; North Saskatchewan River.
Northcots.....	291·00	.....	do do
North-West.....	425·00	42 00	do do
*Wrigley	90·04	12 20	Screw ; McKenzie River.
Victoria .....	.....	.....	Screw ; tugs ; dredgetenders ; Government vessels.
Sir Hector.....			
Regina.....	6·78	.....
	2,342·78	135 56	

* Could not reach these Hudson Bay Co.'s steamers this year ; it is intended to start early and inspect them next year. † Not registered.

EDMUND R. ABELL,
Steamboat Inspector.

STEAM Vessels Inspected for the Year ended 31st December, 1890.

BRITISH COLUMBIA DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		\$ cts.	
Hope	25	January ..	78·49	11 32	
Pearl		do ..	75·27	11 00	
Barbara Boscowitz	180	do ..	269·08	29 52	
Islander	500	do ..	1,495·29	127 60	
North Star		do ..	8·11	5 64	
Etta White	20	February .	97·35	12 80	
Gladys	90	March... ..	146·02	19 68	
K. de K	25	do	61 67	9 96	
Rustler		do	56·84	9 56	
Adelaide	100	do	151·02	20 08	
Fairy Queen	40	do	24·94	7 00	
Nellie Taylor		do ..	5 88	10 96	Two years.
Clara Port		do	25·55	7 08	
Alice		do	54·10	7 72	Two years' dues owing. Only one collected at previous rates.
Wm. Irving	200	do	737·86	67 04	
Amelia	200	April	430·97	84 96	Two years.
Daisy	15	do	84·16	11 72	
R. Dunsmuir	85	.....	230·75	5 00	Special.
Sardonyx	150	Since lost.	561·38	52 88	
Spratt's Ark		April	307·88	65 28	Two years.
Florence	140	do	59·44	9 80	
Nagasaki	25	do	15·13	6 20	
Oriole		do	4·15	10 64	do
Constance		May	49·52	9 00	
Alert		do	43·81	8 52	
Georgie		do	32·16	7 56	
Buzz		do	12·59	6 04	
Nell	50	do	207·00	49 28	do
Swan		do	16·65	6 36	
Skidigate	20	do	37·08	7 96	
Leonora	15	do	33·00	7 64	

STEAM Vessels Inspected, &c.—British Columbia Division—*Continued.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Yosemite	400	June	1,525·03	130 00	
Tepic.		May	70·87	10 68	
Mascotte.....		do	191·53	23 36	
Mystery		June	64·80	10 20	
Clara W. Young		do	30·75	7 48	
Delta		do	14·19	6 12	
Joe Adams.....		do	11·89	5 96	
Brunette	20	do	37·00	7 96	
R. P. Rithet.....	250	do	816·29	73 28	
Princess Louise	300	do	931·76	82 56	
Danube .. (6 cabin..)	(300deck.)	do	886·89	78 96	
Rainbow	75	do	207·41	24 64	
Velos	20	July.....	72·52	10 84	
Emma.....	15	September	35·00	7 80	
Lorne	30	do ..	287·96	31 04	
Belle	12	do ..	66·62	10 36	
Etta White	20	do ..	97·35	12 84	Re-survey after being sunk, raised and repaired.
Thistle.....	30	do ..	222·36	25 76	
Senator.....	30	July 25..	27·63	7 16	
Mystery	20	September	64·80	10 20	Survey for passenger's certificate.
Saturna	15	do ..	22·05	6 76	
Nellie Taylor	10	do ..	5·88	5 48	
Mamie.....	15	do ..	89·60	12 20	
Agnes		October ..	15·67	6 84	
Lottie		do ..	29·24	7 40	
Vancouver.....		do ..	49·96	9 00	
Pilot	25	do ..	183·08	22 64	
Gipsy		do ..	49·63	8 96	
Iris		do ..	19·32	6 55	
Delaware ..	150	do ..	475·20	46 00	
Robt. Dunsmuir	85	do ..	230·00	26 46	
Mermaid.....	20	do ..	66·25	10 30	

STEAM Vessels Inspected, &c.—British Columbia Division—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Chieftain	20	do ..	64·80	10 20	
Isabel		do ..	445·93	43 68	
Falcon		do ..	52·44	9 24	
Stella		do ..	16·32	6 30	
Maude		do ..	174·99	22 00	
			.....	1,544 01	

J. A. THOMSON,
Steamboat Inspector.

STEAM Vessels not Inspected for the Year ended 31st December, 1890.

BRITISH COLUMBIA DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks.
				Why not Inspected and Class of Vessel.
			\$ cts.	
Alexander	331·61	191·57	34 56	Dismantled.
Bella.....	8·01	5·61	5 64	Beyond reach, Naas River.
Despatch	37·10	23·38	7 96	} In Kootenay District. Will inspect in spring of 1891.
Duchess	145·48	91·66	19 60	
Evangeline.....	13·86	8·97	6 12	
Galena.....	47·64	33·35	8 84	
Hyack	33·59	31·33	7 72	Out of service.
Idaho.....	12·04	8·43	5 96	} In Kootenay and at Kamloops.
Kamloops	425·78	268·24	42 08	
Lady Dufferin.	59·23	52·38	9 80	
Marion.....	14·98	9·33	6 20	
Morris	11·66	8·04	5 96	} At Naas River. Great expense.
Spitfire.....	8·00	4·00	5 64	
Peerless.	307·47	256·03	32 56	At Kamloops.
Reliance	313·94	215·69	33 12	Out of service.
Red Star, No. 2	36·95	25·71	7 96	At Spallumcheen.
Spallumcheen	54·29	50·54	9 32	At Kamloops.
Western Slope	831·59	725·71	74 56	Out of service.
Muriel.....	44·13	27·81	8 52	Naas River.
Cariboo Fly	281·82	202·66	30 56	Out of service.
Lytton.....	451·66	284·55	44 14	At Kamloops.
Millie.....	9·24	6·16	5 74	} To be inspected.
Egerman.....	12·07	8·21	5 96	
Wilna.....	4·04	2·75	5 32	} To be inspected.
Nanaimo.....	70·79	44·61	10 66	
Lilly.....	33·57	27·74	7 68	
Totals.....	3,600·54	2,614·46	442 18	

J. A. THOMSON,
Steamboat Inspector.

STEAM Vessels Inspected, &c.—British Columbia Division—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1891.		8 cts.	
Hope.....	25	January..	78·49	11 32	Screw.
Islander.....	500	do ..	1,495·29	135 60	Twin screw.
Barbara Boscowitz....	180	do ..	269·08	29 52	Screw.
Gladys.....	70	March..	146·02	19 68	Stern wheel.
K. de K.....	25	do	61·67	9 96	Paddle.
Etta White.....	20	do	97·35	12 80	Screw.
Amelia.....	200	April....	430·97	84 96	Dues and fees for two years. Paddle.
Wm. Irving.....	200	do	737·86	67 04	Stern wheel.
Adelaide.....	100	do	157·02	20 08	do
Fairy Queen.....	40	do	24·94	7 00	do
Daisy.....	15	do	84·16	11 72	Screw.
Sardonyx.....	150	do	561·38	52 88	do
Spratt's Ark.....		do	307·88	65 28	Dues and fees for two years. Twin screw.
Nagasaki.....	25	do	15·13	6 20	Screw.
Nell.....	50	May.....	207·97	51 28	Dues and fees for two years. Screw.
Hendry's Scow.....	140	May.....		5 00	Passengers for one day.
Georgie.....	40	do		5 00	do do
Clark's Scow.....	180	do		5 00	do do
Badger.....	100	do		5 00	do do
Hare's Scow.....	200	do		5 00	do do
York's Scow, No. 1....	220	do		5 00	do do
do No. 2.....	160	do		5 00	do do
C. Keefe's Scow.....	60	do		5 00	do do
Florence.....	140	do		5 00	do do
Cowper's Scow.....	220	do		5 00	do do
Skidegate.....	20	May.....	37·08	7 96	Screw.
Tepic.....	40	do	70·87	10 58	do
Mascotte.....		do	191·53	23 36	Twin screw.
R. P. Rithet.....	250	October..	816·29	73 28	Stern wheel.
Active.....	20	June.....	171·74	21 75	Screw.
Princess Louise.....	300	do	931·76	82 56	Paddle.
Danube.....	306	do	886·89	78 96	Screw.

STEAM Vessels Imported, &c.—British Columbia Division—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspec- tion Fees Paid.	Remarks.
		1891.		\$ cts.	
Rainbow.....	75	do	207·64	24 64	do
Cutch.....	150	do	324·27	33 92	do
Velos.....	20	July.....	72·52	10 84	do
Yosemite.....	400	do	1,525·03	130 00	Paddle.
Senator.....	30	do	27·63	7 16	Screw.
Lorne.....	30	September	287·96	31 04	do
Emma.....	15	do ..	35·00	7 80	do
Etta White.....	20	do ..	97·35	12 84	do
Belle.....	12	do ..	66·62	10 36	do
Mermaid.....	20	do ..	66·25	10 28	Paddle.
Thistle.....	30	do ..	222·36	25 76	Screw.
Mystery.....	20	do ..	64·80	10 20	do
Saturna.....	15	do ..	22·05	6 76	do
Nellie Taylor.....	10	do ..	5·88	5 48	do
Brunette.....	20	June.....	37·03	7 96	do
Mamie.....	14	September	89·60	12 20	do
Maude.....	45	October...	174·99	22 00	do
Pilot.....	25	do ..	183·08	22 64	do
Delaware.....	150	do ..	475·20	46 00	Stern wheel.
Cutch.....				8 00	Screw. Special inspection.
Telephone.....	50	October...	80·66	11 48	Stern wheel.
Robert Dunsmuir.....	85	do ..	231·75	26 48	Twin screw.
Isabel.....	60	do ..	445·93	43 68	Paddle.
Chieftain.....	20	do ..	64·80	10 20	Screw.
Total.....	5,313	.....	12,589·77	1,471 49	

R. COLLISTER,
Hull Inspector.

STEAM Vessels* not Inspected for the Year ended 31st December, 1890.

BRITISH COLUMBIA DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Dues and Fees.	Remarks.
				Why not Inspected and Class of Vessel.
			8 cts.	
Western Slope.....	831·54	725·71	74 56	Stern wheel. Laid up.
Reliance.....	313·94	215·69	33 12	do do
Cariboo Fly.....	281·82	202·66	30 56	Twin screw.
	1,427·30	1,144·06	138 24	

R. COLLISTER,
Hull Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron; their Gross and Registered Tonnage; where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Ontario.	166-66	Paddle	Steel.	1,615	1,018	Owen Sound, Ont., 1890.	Car ferry between Windsor and Detroit.
Nellie Bly.	1-20	Screw	Wood	6	4	Port Dalhousie, Ont., 1890.	Fishing tug, Lake Ontario.
Clarke Brothers.	1-35	do	do	5	3	Toronto, Ont., 1890.	Freight and tug, Toronto Harbour.
Lilly.	3-33	do	do	22	15	Oakville, Ont., 1890.	Tug, Georgian Bay.
* City of Windsor.	33-66	do	do	511	316	Detroit, U. S., 1883.	Passenger, Lake Huron.
Home Rule.	16-13	do	do	81	45	Thorold, Ont., 1890.	Tug, Welland Canal.
Ida Bell.	1-20	do	do	6	3	Houghton, Ont., 1890.	Fishing tug, Lake Erie.
Mayflower.	41-66	Paddle	Steel.	189	119	Toronto, Ont., 1890.	Ferry steamer, Toronto Harbour.
Starletted Fawn.	3-25	Screw	Wood	25	17	do	Pleasure yacht do
Vick.	1-10	do	do	13	9	Chatham, Ont., 1890.	Tug, River Thames.
Elgin.	1-63	do	do	15	11	Port Elgin, Ont., 1890.	Tug, east shore, Lake Huron.
Sea Gull.	2-13	do	do	19	13	Goderich, Ont., 1890.	Fishing tug, Georgian Bay.
Primrose.	41-66	Paddle.	Steel.	189	110	Toronto, Ont., 1890.	Ferry steamer, Toronto Harbour.
Monarch.	148-20	Screw	Wood	2,017	1,372	Sarnia, Ont., 1890.	Passenger, Sarnia, Lake Superior.
	463-16			4,714	3,064		

* Formerly E. K. Roberts.

O. P. ST. JOHN,
Steamboat Inspector, West Ontario and Huron Division.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron; their Gross and Registered Tonnage; where Built; and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Mayflower.....	2-13	Screw.....	Wood..	14	10	Port Severn, 1890.....	Georgian Bay, tug.
Eva Belle.....	1-63	do	do ..	10	7	Midland, 1890	do fishing tug.
Fred. A. Hodgson.....	25-84	do	do ..	63	43	Collingwood, 1890.....	do tug.
Edgar P. Sawyer.....	6-53	do	do ..	52	41	Buffalo, N.Y., 1886.....	Sault Ste. Marie, tug.
City of Midland	53-86	do	do ..	748	509	Owen Sound, 1890.....	Georgian Bay, passenger and freight.
Camilla	9-37	do	do ..	54	37	Roche's Point, 1890.....	Lake Simcoe, yacht.
Emulator	2-13	do	do ..	25	17	Magnetawan, 1890	Magnetawan waters, passenger and freight.
Erastus Wiman.....	3-33	do	do ..	54	36	Huntsville, 1890	Muskoka Lakes do
Equal Rights	1-2	do	do ..	6	4	Penetanguishene, 1890.....	Georgian Bay, tug.
Seguin.....	106-3	do	Steel...	818	556	Owen Sound, 1890.....	Great Lakes, passenger and freight.
Mascot	2-7	do	Wood ..	Not registered.		Meaford, 1890.....	Georgian Bay, fishing tug.
	214-39			1,844	1,260		

JAMES JOHNSTON,
Steamboat Inspector, West Ontario and Huron Division.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power ; whether of Wood or Iron ; their Gross and Registered Tonnage ; where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Reg. Tonnage.	Where Built.	Where and How Employed.
City of Windsor		A 2	Wood ..	510-52	Screw ..	Detroit	Windsor and ports on Lake Huron ; fish, freight and passengers.
City of Midland.		A 1	do ..	748-41	do ..	Owen Sound	Collingwood and Georgian Bay ports ; freight and passengers.
Erastus Wiman.		B 1	do ..	53-53	do ..	Huntsville	Huntsville and places in vicinity ; freight and passengers.
Equal Rights.		B 1	do ..	5-73	do ..	Penetanguishene.	A tug at Penetanguishene.
Emulator.		B 1	do ..	24-99	do ..	Maganettawan.	Passenger, on Maganettawan River.
Camilla.		A 2	do ..	53-94	do ..	Roché's Point, Lake Simcoe.	A private yacht on Lake Simcoe.
Mayflower.		A 1	Steel. .	189-40	Paddle. .	Toronto	Ferry on Toronto Bay.
Primrose.		A 1	do ..	189-40	do ..	do ..	do ..
Ontario.		A 1	do ..	1615-40	do ..	Owen Sound	Railway car ferry at Windsor.
Seguin.		* A 1	do ..	818-07	Screw ..	do ..	Freight and passengers ; all the lakes.
Monarch.		* A 1	Wood ..	2017-41	do ..	Samia	do .. Samia and Daluth.
Naiad.		A 1	Composi te.	29-02	do ..	Owen Sound	A pleasure boat on Muskoka Lakes.
				6255-82			

THOS. HARBOTTLE,
Steamboat Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron; their Gross and Registered Tonnage; where built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Garnet.	2.7	Screw.	Wood.	18.98	11.62	Kingston, Ont.	Tug boat, Rideau Canal.
Triton.	1.2	do.	do.	11.11	8.25	Ogdensburg, N. Y., U. S.	Passenger, River St. Lawrence.
Zeila.	0.83	do.	do.	3.40	2.79	Brockville, Ont.	Yacht do
Corrella.	0.83	do.	do.	3.81	3.09	do.	do do
Ventura.	0.83	do.	do.	6.77	4.61	Kingston, Ont.	do do
Ingomar.	2.47	do.	do.	18.21	12.38	Carleton Place, Ont.	do do
	8.86			62.28	42.74		

EDWARD ADAMS,
Steamboat Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron; their Gross and Registered Tonnage; where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class,	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Union.....	Screw, passenger.	Wood..	75.04	66.04	Pembroke	Pembroke to Alnnette, ferry.
Triton.....	do ..	do ..	11.11	8.25	Ogdensburg, N. Y.....	Rockport to Cornwall, passenger.
				86.15	74.29		

THOMAS DONNELLY,
Steamboat Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron, their Gross and Registered Tonnage; where Built; and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Union	3-33	Screw	Wood ..	75	66	Pembroke	Pembroke, as a ferry steamer.
G. H. Perley	17-06	do ..	do ..	102	79	Sand Point	Chat Lake, towing logs.
Archie Stuart	10-80	do	do ..	79	50	Ottawa	Ottawa and Lake Champlain, towing.
Shanly	4-80	do ..	do ..	Not known.		do	About Ottawa for Board of Works Department.
D. A. Martin	4-80	do	do ..	47	44	Lake Kippewa	Lake Kippewa, towing logs.
D. McLaughlan	2-20	do	do ..	22		Amprior	do
	43-49			325	239		
St. Olaf	87-80	Screw	Iron	305-27	72-40	Built at Port Glasgow in 1882, lengthened at Aberdeen in 1889.	Mail and passengers, between Pictou, N.S., and Magdalen Island, Gulf St. Lawrence.
L'Ami	6-39	do	Wood ..	15-06	7-65	Built at Lauzon, 1890	Quebec Harbour, tug.
Dana	16-66	do ..	Composite.	54-58	35-11	Built at Sorel, 1889	Pleasure yacht.
Blandford	24-81	Paddle wheel	Wood ..	65-36	26-74	Built at Lévis, 1890	Tow boat between Quebec and Montreal.
*Wm. O'Brien	8-16	Screw ..	Composite.	30-43	12-26	Built at Sorel, 1874	Quebec Harbour, tug.
				471-70	146-16		

* Formerly the "Lizzie."

JOS. SAMSON,
Steamboat Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron, their Gross and Registered Tonnage; where Built; and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Dania.....	16·66	Screw	Compos- ite.	54·58	37·11	Sorel, 1889	Pleasure yacht, Montreal and Quebec.
St. Olaf	87·8	do	Iron	305·27	72·40	Glasgow, 1882	Magdalen Islands and Gulf Ports, as passenger and freight.

PIERRE D. BRUNELLE,
Hull Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron; their Gross and Registered Tonnage; where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Yarmouth	220-27	Passenger.....	Steel.....	1432-16	745-87	Dumbarton, Scotland, 1887.....	Yarmouth and Boston.
Princess Beatrice.....	78-90	Passenger and freight.	Iron	448-18	270-12	Lanark, Scotland, 1874.....	Coasting, Nova Scotia to Prince Edward Island.
Sarcelle.....	10-40	Tug.....	Wood.....	21-86	14-93	Chatham, 1890.....	Miramichi River, N.B.
Amex	43-20	Ferry and passenger.	do	338-42	168-77	Roundout, N. Y., 1878.....	Halifax and Dartmouth.
Fairy	1-40	Tug and water.	do	5-07	2-72	Lumenburg, 1889.....	Lumenburg, N.S.
Yantic.....	1-27	Tug	do	14-16	9-36	Lot 3, P.E.I., 1888.....	Tidnish River, N.S.
Peerless.....	22-83	Passenger.....	do	94-27	80-90	New York, 1884.....	North and South Sydney, C.B.
Weymouth.....	28-88	do	do	153-93	105-83	Weymouth, N.S., 1890.....	Yarmouth, Weymouth and St. John.
Victor.....	6-66	Tug.....	do	45-51	28-67	Chatham, N.B., 1889.....	Richibucto.
Chester.....	16-19	do	do	79-50	36-00	Hantsport, 1890.....	Minas Basin.
Fannie.....	6-53	do	do	33-44	22-74	Philadelphia, 1875.....	St. John, N.B.
W. E. Vroom.....	1-4	Ferry.....	do	10-05	6-83	New Glasgow, 1889.....	Indiantown, Pleasant River, N.B.
Wm. Weatherspoon.....	24-00	Passenger or tug.	do	59-29	34-44	Digby, N.S., 1890.....	Digby to Bridgetown, N.S.
Boston.....	360-43	Passenger and freight.	Steel.....	1694-50	733-77	Glasgow, Scotland, 1890.....	Yarmouth, N.S., to Boston, U.S.
Atlas	2-70	Tug	Wood	15-79	10-74	Port Elgin, N.B.....	Bay Verte, N.B.
Wanda S.....	2-13	do	do	10-44	7-10	do	do
.....

DOUGLAS STEVENS,
Steamboat Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse-Power; whether of Wood or Iron; their Gross and Registered Tonnage; where Built; and where and how Employed.

Name of Vessel.	—	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Bridgewater.	SS.	100 A 1.	Steel.	207	.....	Dumbarton, N.B.	Halifax to Bridgewater, N.S.
Annex 2.	P.W.S.	None.	Wood.	338	168	State of New York, U.S.	Ferry, Halifax to Dartmouth.
W. M. Weatherspoon.	SS.	Am. record.	do.	59	34	Digby, N.S.	Passenger service, &c.
Weymouth.	SS.	do.	do.	153	105	Weymouth, N.S.	Passenger service, between St. John, N.B., and Weymouth, N.S.
Peerless.	SS.	None.	do.	94	80	State of New York, U.S.	Sydney and Bras d'Or Lakes.

C. R. COKER,
Dominion Inspector of Hulls, Equipment, &c.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse-Power; whether of Wood or Iron; their Gross and Registered Tonnage; where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Beaver	5-47	None....	Wood ..	34-15	23-32	Norman, Ontario.....	Lake of the Woods, tug.
Chieftain	2-13	do	do ..	40-00	27-20	Big Forks, Rainy River.....	do ..
Hazel.....	1-20	do	do ..	7-52	5-11	Selkirk, Manitoba.	Lake Winnipeg, fishing tug.
Kemina.....	2-13	do	do ..	41-86	28-47	Keewatin, Ontario.	Rat Portage and Rainy River, passenger.
Shamrock.....	3-33	do	do ..	79-84	55-29	Big Forks, Rainy River.	do .. do .. and freight.
	14-26			203-37	139-39		
Willie Howell.....	.....	.....	.....	24-11	not returned.	.....	Fishing tug, Lake Winnipeg.

EDMUND R. ABELL,
Steamboat Inspector for Manitoba, Keewatin and N.W.T.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power, whether of Wood or Iron; their Gross and Registered Tonnage, where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how Employed.
North Star.	2 0	Screw, fishing boat	Wood...	8 11	5 52	Esquimalt.....	Waters of British Columbia.
Georgie.....	4 8	do tug boat.....	do ..	32 16	19 71	Seabeck, U.S.A.....	Waters of British Columbia, towing.
Mascotte.....	6 6	Twin-screw, freight boat...	do ..	191 53	126 64	Victoria.....	Carrying granite from Nelson Island, B.C.
Mystery.....	24 0	Screw, tug boat.....	do ..	64 80	38 75	Victoria.....	Cannery service, Skeena River, B.C.
Standard.....	22 5	do ..	do ..	51 08	31 16	Victoria ..	Towing and cannery service.
Enterprise	2 0	do pleasure yacht.....	do ..	2 95	2 95	Shawnigan Lake.....	Shawnigan Lake, pleasure.
Thistle.....	24 0	do freight boat.....	do ..	222 36	146 89	False Creek, Vancouver.	Freight and passengers to logging camps.
Chieftain.....	22 5	do tug boat.....	do ..	64 80	38 75	Victoria.....	Cannery service and towing.
Cutch	102 5	do freight and passengers	Iron....	324 27	123 11	Hull, England	Passengers and freight, Vancouver to Nanaimo.
Brunette	14 0	do tug boat.....	Wood...	37 08	25 19	New Westminster.....	Waters of British Columbia.
	224 9			999 14	558 70		

J. A. THOMSON,
Steamboat Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power, whether of Wood or Iron; their Gross and Registered Tonnage, where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how Employed.
Velos	18.0	Screw, tug boat.	Wood.	72.50	49.31	Vancouver	Waters of British Columbia.
Bon Accord	4.8	Stern-wheel	do	84.15	57.23	Victoria	Cannery service, Fraser River.
Earl	21.0	Screw tug boat.	do	Registration not completed.		Vancouver	Mission Bridge, contractor's service.
Telephone	4.3	Stern-wheel	do	80.66	50.82	Vancouver	Passenger service, South Arm Fraser River.
Constance	22.4	Screw, yacht and tug boat.	Composite.	49.52	29.18	Victoria	Pleasure and towing, Fraser River.
156 Clyde	4.3	Twin-screw, freight boat	Wood.	67.87	46.16	Vancouver	Freight, waters of British Columbia.
Lytton	10.0	Stern-wheel	do	451.66	284.55	Kamloops	Freight and passengers, Kootenay district.
Millie	2.2	Screw, yacht	do	9.24	6.16	Vancouver	Pleasure, Burrard Inlet.
Egerman	2.3	do	do	12.07	8.21	Vancouver	Burrard Inlet, employment not known.
	58.3			827.69	531.62		

J. A. THOMSON,
Steamboat Inspector.

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended 31st December, 1890, their Class and Horse Power; whether of Wood or Iron; their Gross and Registered Tonnage; where Built, and where and how Employed.

Name of Vessel.	Horse Power.	Class.	Wood or Iron.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how Employed.
Cutch	102.5	Screw	Iron	324.27	123.14	Hull, England	Vancouver and Nanaimo; freight and passenger.
Velos	18	do	Wood ..	72.52	49.31	Vancouver	Tug, freight and passenger; British Columbia waters.
Thistle	24	do	do ..	222.36	146.89	do	do ..
Mystery	24	do	do ..	64.80	58.75	Victoria	do ..
Brunette	14	do	do ..	37.03	25.19	New Westminster	do ..
Telephone	4.3	Stern-wheel.	do ..	80.66	50.82	do	Freight and passenger; Fraser River.
Standard	22.5	Screw	do ..	51.08	31.16	Victoria	Tug in British Columbia waters.
Chieftain	22.5	do	do ..	64.80	58.75	do	Tug, freight and passenger; British Columbia waters.
George	4.8	do	do ..	.....	.....	Puget Sound	Tug in British Columbia waters.
Mascotte	24	Twin-screw.	do ..	191.53	126.24	Victoria	Freight ..
Bon Accord.	4.8	Stern-wheel.	do ..	84.15	57.23	do	Tug, cannery service.
Constance	22.4	Screw	Composite.	49.52	29.18	do	do ..
Clyde	4.3	Twin-screw.	Wood ..	67.87	46.16	Vancouver ..	Freight, British Columbia waters.
Earle	21.0	Screw	do ..	Not registered.	.....	do .....	.....
				1310.59	782.82		

R. COLLISTER,
Hull Inspector.

STATEMENT of Steam Vessels Lost, broken up or laid up, as unfit for service, in the Dominion, during the year ended 31st December, 1890, and where and how employed.

WEST ONTARIO DIVISION.

Name of Vessel.	Where and How last Employed.	Name of Vessel.	Where and How last Employed.
Annie Watt.....	Georgian Bay, tug.	Mocking Bird....	Georgian Bay, tug.
J. B. Newman...	Lake St. Clair, freight.	Admiral.....	River Thames, do
Albert Dyment...	Georgian Bay, tug.	Leslie.....	Toronto, do
Lady Eborth....	do do	Bruno.....	Georgian Bay, freight.

O. P. St. JOHN,
JAMES JOHNSTON,

Steamboat Inspectors, West Ontario and Huron Division.

WEST ONTARIO DIVISION.

Annie Watt	Tug on Georgian Bay.
-----------------	----------------------	-------	-------

THOS. HARBOTTLE,
Steamboat Inspector.

EAST ONTARIO DIVISION.

Rothesay.	Passenger steamer on River St. Lawrence.	McArthur.....	Tug boat on Lake Ontario.
Catherine.....	do do do	Conqueror.	do do
Quinté.....	Passenger steamer on Bay of Quinté.		

EDWARD ADAMS,
Steamboat Inspector.

EAST ONTARIO DIVISION.

Rothesay.....	St. Lawrence River—Excursion steamer.	Catherine.....	St. Lawrence River—Passenger steamer.
Quinté.....	Bay of Quinté—Passenger steamer.		

THOMAS DONNELLY,
Steamboat Inspector.

MONTREAL DIVISION.

Dagmar.....	Ottawa River, passenger.	Allan Gilmour...	Ottawa River, towing.
Resolute.....	do do towing.	Express.....	do do ferry.
Walter B.....	do do passenger.	Hunter.....	Lachine Canal, towing.
A. H. Baldwin....	do do towing.		

JOHN BURGESS,
Steamboat Inspector.

STATEMENT of Steam Vessels lost, broken up or laid up, as unfit for service, in the Dominion during the Year ended 31st December, 1890, and where and how Employed.

QUEBEC DIVISION.

Name of Vessel.	Where and how last Employed.	Name of Vessel.	Where and how last Employed.
Boston.	Paddle wheel, tug, Montreal and Quebec.	Latuque	Paddle wheel, tug, Montreal and Quebec.
William	Paddle wheel, tug, Montreal and Bic.	Pioneer.	Paddle wheel, tug, Lake St. John
*Wm. O'Brien.	Screw, Quebec Harbour, tug.		

*Formerly the Lizzie.

JOS. SAMSON,
S. B. Inspector.

QUEBEC AND MONTREAL DIVISION.

Walter B.	Ferry, Pembroke and Allumette Island.	Bienvenu	Paddle, passenger, Quebec and Ste. Anne.
-------------------	---------------------------------------	--------------------	--

PIERRE D. BRUNELLE,
Hull Inspector.

MARITIME PROVINCES DIVISION.

Selma	Wrecker, Halifax, N.S.	Secret	Passenger, Bay of Fundy.
Princess Beatrice.	Passenger and freight, Halifax to P.E.I.	St. George.	Tug, Chatham.
Mindoo.	Tug, Miramichi River.	Meta.	Tug yacht, St. John.
Norwegian.	Ferry, Port Mulgrave.	Laddie.	Tug, Miramichi.
Jessie A. Campbell	Tug, Hopewell to Dorchester, N.B.	John William.	Tug, St. John River.
Empress	Passenger, Bay of Fundy.	Islet	Tug, Halifax.

SUPPLEMENTARY FROM 27TH OCTOBER, 1890.

General.	Tug, St. John River.	Clansman.	Tug, Wallace, N.S.
Molega.	Passenger, Ponhook Lake, Queen's Co., N.S.		

DOUGLAS STEVENS, *Steamboat Inspector.*

Princess Beatrice.	Halifax and P.E.I.; wrecked on the Nova Scotia Coast in October, 1890; a total loss.	May Queen	Passenger vessel, Sydney and Bras d'Or Lakes; caught fire and destroyed; now receiving a new boiler and other repairs.
William	Ashore and received damage to bottom; now laid up for repairs.		

CHARLES R. COKER, *Dominion Inspector of Hulls, Equipment, &c.*

STATEMENT of Steam Vessels lost, broken up or laid up, as unfit for service, in the Dominion during the Year ended 31st December, 1890, and where and how Employed.

MANITOBA, KEEWATIN AND NORTH WEST TERRITORIES DIVISION.

Name of Vessel.	Where and how last employed.	Name of Vessel.	Where and how last employed.
Ida of Winnipeg.	Selkirk and south end of Lake Winnipeg; tug.		

EDMUND R. ABELL, *Steamboat Inspector,*
For Manitoba, Keewatin and N.W.T.

BRITISH COLUMBIA DIVISION.

Alexander.	Tug; waters of B.C.; dismantled and sold out of Dominion.	Beaver	Tug; waters of B.C.
Sardonyx.	Northern Route, B.C.; freight and passengers; lost.	Wilson G. Hunt.	Passengers; Victoria to Nanaimo; broken up.

J. A. THOMSON, *Steamboat Inspector.*

Sardonyx.	Freight and passenger; wrecked.	Beaver	Tug; wrecked.
Alexander	Tug; dismantled.	Wilson G. Hunt.	Freight and passenger; broken up.

R. COLLISTER, *Hull Inspector.*

APPENDIX No. 19.

STATEMENT of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels, in Canadian waters, and to Canadian Sea-going Vessels in other waters, for the eleven months ended 31st October, 1890.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1889.												
Mar. 26	Achsah	9	Shelburne	Brigantine	138	Barbados to Portland, Me.	Cutty Hunk, Mass.	Stranding ..	.....	.....	Total ..	\$ 5,000
1890.												
Aug. 3	Adelia	20	Annapolis	Schooner	163	Clementsport to Boston	Cranberry Island, Me.	do	Thick weather.	.....	Partial..	400 cargo 275
Oct. 12	Algeria	19	St. John, N.B.	Barque	620	Belfast, Ireland, to Sydney, C.B.	Cape Dauphin, C.B.	Miscellaneous.	Loss of canvas and stress of weather.	.....	Total ..	8,000
do 1	Alice Cooper	18	Windsor	do	863	Belfast to Philadelphia Lat. 49° 24' N.; Long. 44° 6' W.	.....	Losing and splitting sails	Bad weather ..	.....	Partial..	300
May 1	Alma Cook	3	Shelburne	Schooner	65	Lockeport to Sydney, C.B.	Duncan's Reef, entrance to Halifax Harbour.	Stranding	Strong west-erly current.	.....	do ..	2,400 cargo 200
Dec. 9	Alpha	15	Yarmouth	Steamer	211	St. John to Yarmouth.	2 miles west of Cape Forchu.	Lost her propeller.	.....	.....	do ..	400
1890.												
Jan. 27	Alvin Kelly	15	Shelburne	Brigantine	326	Manzanilla to New York.	Antonio Reef, west end of Cuba.	Stranding	Very thick weather.	.....	Small ..	.....
April 27	Amanda S	2	St. John, N.B.	Schooner	24	St. John, N.B., to Harvey, N.B.	1 mile west of Vaughan's Creek, N.B.	Parted chains; ran ashore; afterwards floated and taken into St. Martin's.	Rough weather ..	.....	Partial..	60
June 5	Amazon	8	Lunenburg	do	73	Lunenburg to White Head.	Entrance to White Head Harbour.	Stranding	Fault of pilot ..	.....	do ..	50
April 21	Anos B.	14	Guysboro'	do	80	Halifax to Canso	Dover Breakers, Middle Rock.	do	Fog .....	.....	do ..	800 cargo 1,500

STATEMENT of Wrecks and Casualties to Sea-going Vessels, &c.—Continued.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. — Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1890.												
June 11	Amy D.	7	Yarmouth.	do	110	Parrsboro' to Plymouth Mass.	Plymouth Harbour. . .	do	do	do	do	4,152 cargo 25
July 26	Angeline.	12	do	do	67	Barrington to Pubnico.	John's Island Lodge, Lobster Bay, N.S.	do	Compass correct.	not	Total. . .	1,500 cargo 750
Aug. 4	Anna Carrier	23	St. John.	do	99	Boston to St. Martin's.	Mount Desert, S.S.E., off $\frac{3}{2}$ mile.	Collision. . .	Dark and dense fog.	do	Partial. . .	100
1889.												
Dec. 5	Annie A.	6	Pictou.	do	79	Summerside to Demersara.	3 miles south of Halifax	Damaged. . .	Gales.	do	do	1,000
1890.												
Sept. 25	Annie Gale	8	St. John, N.B.	do	96	Shulee, N.S., to New-Port, R.I.	About 5 miles S.S.W. of Matinecas, Maine.	A rotten main-mast and leak	do	do	do	125
July 3	Annie S.	5	Halifax.	do	34	Richibucto to Halifax.	Richibucto Harbour . .	Stranding . .	Struck on oyster beds.	do	Total. . .	50
June 19	Annot Lyle	26	Liverpool, G.B.	Schooner	1246	Great Britain to Quebec via Sydney, C.B.	Cranberry Head, outside Sydney Harbour.	Miscellaneous.	Tide, heavy sea and thick fog.	do	Small . .	..... cargo 1,000
1889.												
Dec. 25	Arbutus.	6	St. John, N.B.	Brigantine	396	St. John to Buenos Ayres.	Chico Bank, River La Platte.	Stranding . .	Mistook a wreck for lightship.	do	Partial. . .	3,000
1890.												
Jan. 23	Ashlow.	10	do	Bark. . .	639	Cork, Ireland, to St. John, N.B.	Swansea Harbour, Wales.	do	Heavy weather. . .	do	do	11,000
Aug. 21	Aspatagon.	13	Yarmouth.	do	861	Port au Spain to Philadelphia.	S. Coast of Porto Rico, Caribbean Sea.	Foundered. . .	Heavy rolling and straining caused a leak on which the pumps had no effect.	Total. . .	Total. . .	25,000 cargo 3,000
Oct. 17	Avalon.	2	Windsor, N.S.	Schooner	122	Newcastle, N.B., to New York.	to 30 miles of Mt. Desert.	Deck injured and deck load lost.	Heavy weather	Partial. . .	Partial. . .	200 cargo 150

May 16	B. Weir & Co.	21	Arichat.	do	25 St. Peter's, C.B., Port Malcolm.	do	Stranding....	Struck on Glasco's Point.	do	150 cargo
Aug. 28	Belle Bartlett.	23	United States.	do	76 Provincetown, Fishing.	do	do	Bar not buoyed.	do	150
June 9	Ben Bolt.	26	St. Andrew's, N.B.	do	99 New York to St. George, N.B.	do	do	Mistayed and ran ashore.	Total....	1,000 cargo
Jan. 13	Ben Hur.	new	United States.	do	100 Gloucester, Mass., Fishing.	do	do	Miscalculated distance.	do	12,000 cargo
Aug. 5	Bertie McLean.	"	St. John, N.B.	do	249 Providence to St. John, N.B.	do	do	Thick fog.	Partial..	6,000
Aug. 27	Bessie	21	do	do	40 Apple River to St. John, N.B.	do	do	Gale.	Total....	250 cargo
Dec. 20	Bessie G.	6	Parrsboro', N.S.	do	69 Port Greville to Rockland.	do	do	do	1 Partial..	1,500 cargo
Dec. 25	Beta.	15	Lunenburg	do	41 " " " " " "	do	do	do	Total....	500
May 7	Blanche.	new	Sydney	do	219 St. John to New York.	do	Collision with Str. "Lansdowne."	do	Partial..	304
Aug.	Bloomfield	1½	Charlottetown	do	98 Cuba to North Hatteras.	do	Stranding....	Sprung a leak and had to beach her.	do	2,000 cargo
March 6	Blizzard.	6	Lunenburg	do	132 St. Kitts, W.I., to Halifax.	do	Leaking....	Gales and rough sea.	do	2,300
June	Bonavista.	6	Montreal	Steamer.	837 Liverpool, G.B. to North Sydney.	do	do	Gale.	do	300
May 3	Byron M.	8	Windsor, N.S.	Schooner.	128 Rio Grande de Sol to Montevideo.	do	Stranding....	Hurricane.	Total....	6,000
Feb. 20	C. C. Vanhorn.	21	Windsor, N.S.	Brigantine	376 Hantsport, N.S., to Minas Basin.	do	Broke from moorings and drifted in the ice.	do	Partial..	1,000
Nov. 20	Calliope.	22	do	Barque	1179 St. John, N.B., to Tanquer.	do	Lost deck load and top gear.	Heavy weather.	do	9,000 Cargo
Jan. 9	Candor	23	Shelburne	Schooner.	86 Boston to Georgetown, P.E.I.	do	Blown by gale on to wharf and smashed bow and stern.	do	Partial..	300
April 3	Canning	16	Windsor, N.S.	Brigantine	657 Barbadoes to Philadelphia.	do	Lost spars.	Heavy weather.	do	150

STATEMENT of Wrecks and Casualties to Sea-going Vessels, &c.—Continued.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives lost.	Total or Partial Loss.	Amount.
1890.												\$ cts.
Aug.	Cape Breton	Nw	Liverpool, G. B	Steamer...	1109	Sunderland to Sydney, C.B.	Petty Harbour, Nfld.		Unknown current and thick fog.			
Oct. 12	Cardigan	Nw	Charlottetown	Schooner.	37	Cardigan to St. Pierre Miquelon.	22 miles W. of Langlade Island, Nfld.	Miscellaneous.	Heavy gale.		Partial.	100 Cargo, 150
Sept. 18	Carita	1	Port Medway.	do	120	Boston to Newburyport	Newburyport Bar.	Stranding	Boys out of place.		No loss.	
July 14	Carl Schurz	18	Gloucester, Mass.	do	69	Gloucester fishing.	S. side of Amherst Islands, Magdalen Islands.	do			Partial.	1,000
May 22	Carrier Dove	11	St. John, N. B.	Barque	1026	St. John, N. B., to Glasgow.	Lat. 50° 36' N., Long. 39° 40' W.	After being in the ice, filled and abandoned.			Total	25,000 Carg., 11,644
Oct. 17	Chateauguan	4	Parrsboro	Schooner.	97	New York to St. John, N. B.	Matinicas, Me., bearing N. E., 45 miles.		Heavy gales and frequent changes.		Partial.	175 Cargo, 200
May 23	Christina Moore	9	Windsor.	do	216	Montevideo to Boston.	Nantucket Shoals.	Stranding	Heavy weather.		Partial.	700
June 9	City Bell	13	Halifax.	do	21	Halifax fishing	Entrance of Amherst Harbour, Magdalen Islands.	do	Missed the buoys.		Total	700 Cargo, 400
Aug. 6	Clare	4	Yarmouth.	Brightine	229	Sydney to St. John	Point Lepreaux.	do	Thick fog; fog alarm out of order.		Partial.	2,750
Sept. 17	Clifton	4	St. John, N. B.	Schooner.	219	Boston to St. John	Matinicas, Me., bearing N. N. E., 10 miles	Collision with Schooner 'Hale Todd'	Heavy gale.		do	50
Oct. 7	Congo	1	Shelburne	do	196	St. John's, Nfld., to Bayfield, N.S.	At wharf, Bayfield.	Miscellaneous.			do	300
Mar. 12	Dagnar	24	Montreal	Steamer.	245	In winter quarters	Cono, Quebec	Burnt			Total	10,000
May 20	David Taylor	21	St. John, N. B.	Barque	599	Londonderry, Ireland, to St. John, N. B.	12 miles E. of Lockeport, N. S.	Stranding	Out of proper course.		do	30,000

do	13	Diadem	4	Lumenburg	Brigantie	162	Provincetown, Mass., to Halifax.	Bay of Fundy	Miscellaneous.	Heavy sea and gale.	Partial.	1,000
Oct.	8	Dorothy	1	St. John's, Nfld	Schooner	48	North Sydney to Charlottetown, P. E. I.	E. side of Grand Narrows Bridge.	do	.....	do	100
May	9	Drusilla	6	Halifax	do	32	Magdalen Islands to St. Pierre, Miquelon.	Langley Island, Newfoundland.	Stranding	Strong current	Total.	1,000 cargo 1,500
Oct.	18	Dunrobin	16	Windsor	Ship	1375	Perth Amboy to Rotterdam.	Rot-Banjaar Banks	do	Heavy weather	do	25,000 cargo 45,000
May	28	E. Sutton	14	St. John, N.B.	Barke	545	Cuba to Boston.	Reef off of Isle of Pines, W. I.	do	.....	do	12,000 cargo 50,000
Aug.	27	Edmund	11	Amherst	Schooner	107	Hillsboro' to Boston.	4 miles north of Mount Desert Rock.	Miscellaneous.	Sprung a leak and abandoned.	do	1,400 cargo 775
Oct.	12	Edward Blake	8	Shelburne	do	99	Boston to Picton	Off McNutt's Island, entrance to Shelburne Harbour.	Ran into by unknown vessel and cut down below water line.	.....	Partial.	1,500
do	6	Electric	22	Gaysboro'	do	58	Picton to Cow Bay	Near Picton	Main boom broke and could not keep vessel off shore.	.....	Total.	1,000
Aug.	24	Eliza B. Campbell.	1	Gloucester, Mass.	do	95	Gloucester, Fishing.	Canso, N. S.	Stranding	Harbour full of vessels and ran ashore.	Partial.	250
Oct.	11	Eliza Jane	13	Shelburne	do	21	Arlchat to Charlottetown.	Roy's Beach, Picton Co., N. S.	Could not weather the shore	Gale	do	200 cargo 100
do	1	Elizabeth	26	Sweden	Barque	609	Bordeaux to Sydney.	300 miles E. of Sechartie.	Struck by hurricane and thrown on beam ends, righted and reached Sydney.	.....	.....	.....
May	5	Ellen Eliza	20	Halifax	Schooner	21	Gabarus to Halifax.	Point Michaux, C. B.	.....	Very thick weather.	Total.	1,000 cargo 300
Jan.	15	Emilie L. Boyd	9	Yarmouth, N. S.	Barque	1240	New York to Hong Kong.	N Lat. 25° 40', W. Lon. 32° 20'.	Collision with Norwegian ship "Rolf."	.....	do	40,000
Sept.	4	Estella	6	Digby	Brigantie	270	Bear River to Barbados	W. side of Digby Gut.	Stranding	Dead calm, ebb tide.	.....	.....
Oct.	5	Estella	8	St. John's, Nfld	Schooner	75	St. Jacques, Nfld., to Bay of Islands.	18 miles N. W. of Cape Ray Light.	do	Gale.	Partial.	300

STATEMENT of Wrecks and Casualties to Sea-going Vessels, &c.—Continued.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1890.												\$
Aug. 1	Etta White....	19	Victoria, B.C.	Steamer..	97	Vancouver to Victoria.	Welcome Pass, B.C.	Stranding	Struck an unknown rock.			
May	Eveline.....	5	Newcastle, G.B.	do	844	Shields, G.B., to Cow Bay, C.B.	Cow Bay.	do	Thick fog.			
Aug. 14	Fearnot.....	10	Halifax.....	Schooner.	92	Halifax to Boston.....	Sheet Harbour Passage	do	Loss of rudder	Partial..		200
Oct. 15	Fearnought ..	31	Liverpool, G.B.	Ship.....	1292	St. John, N.B., to Fleetwood, G.B.	Lat. 45° N.; Long. 44° W.	Abandoned..	Very old ship and heavy gales.	Total...		10,000 cargo 9,892
Sept. 22	Finance.....	1	Lunenburg ..	Schooner.	58	Canso, Fishing.....	On W. side of George's Island, Canso Harbour.	Stranding	Stood to close to shore.	Partial..		150
Aug. 24	Finn.....	22	Norwegian...	Brigantine	179	Bristol to Quebec.....	Gabarus Bay, C.B.			Total...		6,000
Oct. 1	Finsbury....	10	London, G.B.	Steamer ..	1230	Glasgow to Sydney, C.B.	Lat. 48° 40' N.; Long. 41° 12' W.		Heavy sea and gales.	Partial..		2,500 cargo 400
do	Florence C....	4	Pictou.....	Schooner.	97	Halifax to St. Peter's, C.B.	Long Beach, St. Peter's Bay.	Stranding	Gale.....	do		1,000
Feb. 13	Florence Christine.	10	Digby, N.S.	do	90	Annapolis to Demerara	Near Bliss Harbour, N.B.		Heavy wind	do		600
Oct. 24	Foaming Billow	29	Halifax	do	66	Port Caledonia to Halifax.	Black Rock Lt., C.B.	Devi'd by tide and touched ground.		do		250
July 31	Forest Holme..	new	Maryport, G.B.	Steamer ..	1545	Maryport to Montreal.	Coast of Labrador.		Dense fog.			
Jan. 25	G. C. Kelley...	5	Shelburne	Schooner.	98	Boston to Lockeport..	Near Yarmouth.....		Mistook lights	3 Partial..		1,500
May	Geo. E. Corbett	16	Annapolis, N.S.	Barquentine	450	St. John to Ireland....	Atlantic Ocean.....		Ice, heavy sea and wind.	Total...		25,000

Oct. 17	G. G. King	9	St. John, N.B. Schooner	64	River Helbert to St. Off Black Point, Part-Agraving piece came out of ridge Island, W. N. John, N.B.	W. 3 miles.	Partial..	100
Sept. 14	Gasper Embree	9	Chatham, N.B.	95	Richibucto to Boston.	Strained, sprung a leak and put back to Salmon River, N.S.	do ..	1,800
July 18	Galaxy	31	Liverpool, N.S.	33	Liverpool to Arichat.	Thrum Cap, Halifax Stranding Harbour.	Total ..	800
do	General	24	St. John, N.B. Steamer	24	Towing on the St. John River.	Oak Point, St. John Fire River.	do ..	10,000
Oct. 13	Georgie Willard	16	Portland, Me., U.S.	52	Portland to Lockeport.	Lockeport Harbour .. Stranding ..	Partial..	500 cargo
Dec. 10	Gladys	9	Sydney	57	N. Sydney, Fishing	Middle Arm, Bay of Islands, Nfld.	Total ..	2,300 cargo
Jan. 17	Gleaner	18	United States	60	Gloucester, Fishing	Near Yarmouth, N.S.	Partial..	600
Feb. 18	Glen	4	St. John	124	St. John to New York.	Little Duck Island, Maine.	Total ..	5,200 cargo
Oct. 18	Golden Hope	1	United States	101	Gloucester, Fishing	Sydney Harbour ..	Partial..	120
Aug. 3	Governor Butler	6	Gloucester, Mass.	88	do	On All Right Rock, Magdalen Islands.	do ..	150
April 4	Grace	15	St. John, N.B.	67	Lands End, N.B., to St. John, N.B.	Struck wharf, filled and capsized.	Total ..	350
Jan. 14	Grande	5	Maitland	1578	Cardiff to Montevideo	English Channel .. Serious ..	Partial..	13,000
Oct. 5	Hanna	26	Norway	269	Buctouche to Liverpool (Great Britain.	Off Magdalen Islands and mouth of Pictou Harbour.	do ..	700 cargo
Sept. 25	Harriet	43	Arichat	26	Arichat to Port Mulgrave.	Black Rock, Lemox Passage, County Richmond, N.S.	do ..	50
Oct. 12	Harriet	26	Pictou	27	Pictou to Pugwash	Fraser's Cove, Pugwash.	Total ..	400
Aug. 1	Harry G. French	6	Gloucester, U.S.	95	Gloucester, Fishing	South side of Malpeque Bar, P.E.I.	Partial..	75

STATEMENT of Wrecks and Casualties of Sea-going Vessels, &c.—Continued.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1890.												
do 26	Harry W. Lewis	1	St. John, N.B.	do	297	Bristol, G. B., to Sydney C. B.	Atlantic Ocean.	Struck by a squall and carried away	a Gale.			
Jan. 24	Harvester	10	do	do	113	St. John to New York.	Grand Manan, N. B.	Stranding	Thick weather		Total	1,500 cargo 795
Mar. 10	Hazel Dell	6	Yarmouth	do	87	Magna to Yarmouth	N. lat. 22° 56', W. long. 74° 45'	Damaged in a squall.			Partial.	1,000
Aug. 31	Hattie Dell	5	Barrington	do	110	Turk's Island to Boston	Gulf Stream, 41° N. lat. ; 67° 55' W. long.	Stranding	Struck by a heavy squall and cut away spars.			
Sept. 14	Henry A. Burnham.	16	Boston	Brigantine	473	New York to Halifax.	Seal Island Light.	do	Unknown current log out of order.		Total	3,500 cargo 600
Feb. 17	Hope	10	Victoria, B. C.	Steamer	48	Victoria to Vancouver.	Portland Island.	Stranding.			Partial.	1,200
Jan. 19	Howard A. Turner.	3	St. John, N. B.	Barque	505	St. John to Dublin	N. lat. 51° ; N. long. 12°	Abandoned.	Gales		Total	18,000 cargo 7,000
July 25	Hyacinthe.	10	St. John's, Nfld.	Schooner.	29	Richibucto to North Sydney.	West Bay, Bras d'Or Lake.	Stranding	Thick fog.		Partial.	140 cargo 40
Oct. 18	Ida	26	Norway	Brig	299	Rockfort to Richibucto	Richibucto Bar.	do	Gale.		Total	5,000
July	Isabel	24	Victoria, B. C.	Steamer	338	Victoria to Nanaimo	S. W. end of Trial Isl'd (George).	do	Currents and fog.		Partial.	75
Aug. 7	J. & S.	9	Charlottetown	Schooner	25	Sydney to Murray Harbour, P. E. I.	15 miles N. of Cape St. George.	Defective fore-mast.			do	150
do 1	J. P. Craig	24	Portland, Me.	do	73	Portland, Fishing.	About 10 miles from East Point, P. E. I.	Collision with an unknown schooner.			do	150

Jan. 30	J. T. Smith...	8	Dorchester...	Ship.....	1277	Antwerp to New York.	Flushing.....	Collision.....	do ..	850
May 25	James & Ella ..	6	Gloucester ..	Schooner ..	85	Gloucester, Fishing ..	West side of Fox Bay ..	Stranding.....	Fault of pilot.....	500
July 2	James Martin..	7	Pictou ..	Barque.....	1367	Newcastle to Valparaiso	Valparaiso Bay.....	do ..	Hurricane ..	40,000 cargo 3,500
Jan. 13	Jane Ingram...	10	St. John ..	Schooner ..	156	Portland to St. John ..	Prospect Harbour, Maine, U.S.	do ..	Storm.....	5,000
Feb. 22	Joequinna.	15	Liverpool, N.S.	Brigantine	356	Winnington to Santos	Rocas.....	do ..	Error in chronometer.	10,000
Oct. 4	John A. McGowan.	2	Shelburne ..	Schooner ..	96	N. Sydney to Charlottetown.	N. side of Carey's Pt., at entrance to Bras d'Or Lake, 4 mile from shore.	do ..	Thick fog and strong breeze.	350 cargo 100
do	John A. McGowan.	2	do ..	do ..	96	do ..	Sand Point Bar, about 200 yds. from light house, inside the buoy.	do ..	Very hazy.....	300
Jan. 23	John McLeod..	5	St. John ..	Ship.....	1595	Yokohama to Iloilo.	Near Yokohama, Japan	do ..	do ..	20,000
May 12	John Tilton....	34	Charlottetown P.E.I.	Schooner ..	65	Pownal, P. E. I., Glouce Bay, C.B.	to Chedabucto Bay, N.S.	Fire ..	Total ..	800 cargo 390
Oct. 27	Kate ..	17	Halifax ..	Schooner..	77	Chatham, N.B., Sydney, C.B.	to 3 miles off Harbour at Bouche, George's Bay	do ..	Sudden squall, broke masts and tore sails	150
do	Kate.....	11	Shelburne ..	do ..	131	White Head, to Pierre Miquelon.	St. N. side Bernard's Isl'd, Lemox Passage.	do ..	Mistook east sheal for west and run a- ground.	1,000 cargo 700
Aug. 23	Kohinoor ..	14	Pictou ..	do ..	77	Pictou to Chatham, N.B.	Escuminac Reef.....	Stranding ..	Heavy sea ..	600
Jan. 9	Laburnum.....	1	Shelburne ..	do ..	115	Halifax to Porto Rico	Not heard from after leaving the harbour; supposed to have up- set off Halifax Har- bour.	do ..	do ..	10,000
Oct. 5	Lady Franklin..	30	St. John's, Nfld	do ..	62	Aspy Bay to Halifax ..	St. Ann's Bay, C.B....	Caught by a gale in St. Ann's Bay.	Driven ashore, got off.	450 cargo 250
May 15	Lady of the Lake	17	Halifax ..	Barque....	552	New York to Windsor, N.S.	S.W. point of Block Is- land, U.S.	Stranding.....	Strong tide and fog.	6,000
do	Lansdowne....	5	Ottawa ..	Steamer..	463	St. John, N.B., Quaco, N.B.	to St. John Harbour.....	Collision.....	Heavy freshet in harbour.	300

STATEMENT of Wrecks and Casualties to Sea-going Vessels, &c.—Continued.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1890.												
Aug. 22	Lathama	6	Glasgow	do ..	265	Philadelphia to Little Glance Bay.	Soldier's Ledge, S.W. coast, N.B.	Stranding	Unknown cur- rents.	.....	.....	\$
Mar. 7	Laura	30	Chatham, N.B.	Barque...	349	Bordeaux to St. John, N.B.	Never heard of after sailing.	.....	.....	10 Total...	.....	5,000
1889.												
Dec. 4	Lama	14	Pictou, N.S.	Brigantine	329	Demerara to New York	70 miles south of Cape Hatteras.	Loss of top gear.	Stress of wear ther.	.....	Partial.	1,500 cargo
1890.												
June 21	Laura	19	Digby	Schooner..	125	Rockland, Me., to Wey- mouth, N.S.	Gull Rock, N.S.	Foundering	Set of tide ...	.....	Total...	1,500
Aug. 2	Laura Victoria.	2	Arichat	do ..	39	Descousse, fishing.	N.E. bar, 2 miles from Brian Island.	Heavy sea and rough.	.....	.....	Partial..	100
May 19	Laurel	20	Windsor, N.S.	do ..	43	Moncton to Apple River.	Pudsey's Reef.	Stranding	Heavy weather	.....	Total...	250
Jan. 24	Laurissa	1	St. John, N.B.	do ..	122	New York to St. John, N.B.	Ram's Island, Maine..	do .....	.....	.....	do ..	7,200 cargo
1889.												
Dec. 27	Lennie	7	Yarmouth	do ..	99	Antigua to Yarmouth.	Digby Neck, N.S.	do	Gale	2	do ..	2,500 cargo
1890.												
Oct. 20	Lima	20	St. John, N.B.	do ..	27	Bass River, N.B., to Isle Joggins, N.S.	Haute, Bay of Fundy.	Lost sails and anchors, and ran vessel ashore.	do .....	.....	do ..	275
Apr. 29	Little Fred	12	Digby	do ..	25	Westport to Belliveau's Cove.	South side of Peter's Island.	Foundering	Inexperience of tides.	.....	do ..	400

Aug. 3	Lion	6	Lunenburg....	do ..	146	Lunenburg to Kingston, J.A.	King-Lat. 29° N.; 69° W.	Long.	Foundered....	Hurricane	do ..	15,000
July 14	Lizzie M.	7	Centre Gloucester, U.S.	Schooner.	78	Gloucester, Fishing....	Beaton's Point, P.E.I.	Stranding	Partial..	do ..	50	
May 14	Llewellyn	12	St. John	do ..	62	St. John to Rockland..	E. entrance of Fox Island Thoroughfare, Maine, U.S.	do	Struck on unknown ledge.	do ..	60	
do	Lottie E.	8	Yarmouth, N.S.	Brigantine	167	St. John, N.B., to San Domingo.	About 17 miles W.S.W. of Briar Island.	Collision	Thick and hazy.	do ..	1,000	
do	Lulu Ammerman.	17	New York....	Schooner.	285	Boston to St. John, N.B.	Long Murr Ledge, Grand Manan, 6 miles N.W.	Stranding	Dense fog; heavy sea; no wind.	Total...	8,000	
Aug. 4	Lyra	7	St. John, N.B.	do ..	99	St. John to Providence	Mount Desert Rock, S.E. about 3 miles.	Collision with the Anna Currier.	Dark and dense fog.	Partial..	200	
do	M. P. Reed ...	27	do ..	do ..	30	St. John to Campobello	Between Head Harbour and Spruce Island, Campobello.	Foundering...	Starting of a butt.	Total...	550 cargo 210	
May 20	Mabel Purdy...	7	do ..	do ..	93	Quaco, N. B., to New York.	18 miles S. E. of The Wolves, Bay of Fundy.	Collision	Run into by barque Parmatta.	Partial..	1,500	
Oct. 6	Maggie Blanche	12	St. Johns, Nfld.	do ..	47	St. Pierre, Miquelon, to Charlottetown.	N. side of Sand Point, Strait of Canso.	Stranding	Gale and thick weather.	do ..	150	
do	Maggie G. Fiancier.	5	do ..	do ..	66	Great Harbour, Georgetown, Nfld.	To E. side of Ramea Reach	Making Ramea Reach for a harbour, struck on a rock.	do ..	do ..	330	
do	Marie Anna....	22	Turk's Island..	Brig.....	250	Halifax to Cow Bay ..	Cow Bay, C.B.	Miscellaneous.	Parted chains.	Total...	3,500	
do	Marie Vigilante	11	Quebec.	Schooner.	114	Cow Bay to Quebec....	N. of Bear Island, Strait of Canso.	Stranding	Fog and gale..	Partial..	1,000 cargo 300	
Aug. 6	Marion	13	Gloucester....	do ..	78	Gloucester, Fishing....	About 8 miles E. of Grand River, C.B.	do	Thick fog.	Total...	4,400 cargo 300	
May 8	Maud Carter...	5	Halifax....	do ..	92	Halifax to St. Pierre, Miquelon.	N. side of Sandy Hook Bar, Magdalen Islds.	do	Gale.....	Partial..	700 cargo 3,300	
Jan. 2	Maud Seammell	16	St. John, N.B.	Bark	593	Montevideo to Rodenda	Sands of Isabella, Brazil.	do	Error in chronometer.	Total...	8,000	
do	May	16	Lunenburg....	Brigantine	148	Jamaica to Lunenburg.	Red Head Reef, Lunenburg.	do	Fog	Partial..	2,500	

STATEMENT of Wrecks and Casualties to Sea-going Vessels, &c.—Continued.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. — Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1890.												
Oct. 12	Melmerby.	26	Liverpool, G.B.	Barque.	1487	Quebec to Greenock.	Roy's Island Beach, Picton Harbour, N.S.	Waterlogged and disabled in gale of 5th Oct.; driven ashore 12th Oct., 1890.		15	Total	15,000 cargo 15,000
	Merchant.	54	Windsor, N.S.	Schooner.	48	Cornwallis to Boston.	Near Boston, Mass.	Stranding			do	300
	Mondego.	18	Glasgow, G.B.	Steamer.	1404	Montreal to London.	Near Verchères, Lawrence River.	Stranding	Breaking of rudder chain.			
Aug. 27	Monrovia.	12	St. John, N.B.	Ship.	1493	Iloilo to Montreal.	Off River du Loup, St. Lawrence.	Ran aground.			No loss.	
	Myrtle.	9	Annapolis.	Brigantine.	169	St. Thomas to Porto Rico.	Driven ashore on Island of Vignis, W.I.		Failure of anchor to hold.		Total	5,000
Oct. 18	Napoleon III.	34	Quebec.	Steamer.	749	Cape Ray to Sydney.	North side of Bay entrance.	Stranding	Gale.		do	50,000
Jan. 21	Nellie Bruce.	8	St. John.	Schooner.	117	New York to St. John.	Cross Island, Maine.	Collision with scho. "Francia."			Partial.	1,500
May 3	Nellie Starr.	24	Maine, U.S.	do	216	Boston to St. John, N.B.	Musquash, near St. John, N.B.	Stranding	Sail filled wrong way.		do	1,300
Jan. 6	Nordcap.	34	Chatham, N.B.	Barque.	611	St. John, N.B., to Penarth Roads.	Lat. 44° 21' N.; Long. 35° 24' W.	Abandoned	Gales.		Total	8,000 cargo 5,193
May 14	Norseman.	1	Gloucester, Mass.	Schooner.	116	Gloucester fishing.	South Beach, Magdalen Islands.	Stranding	Mistook lights.		Total	16,000
Oct. 24	Norumbega.	34	do	do	120	do	Sydney Harbour, C.B.	Stranding in too close and touched ground			Partial.	350

Aug. 23 Norumbega ...	12	do	do	120	do	Magdalen Islands.	Struck on a rock $1\frac{1}{4}$ miles S.E. of All Right Island. Stranding....	do	150
June 23 Olive Branch...	10	Lunenburg	Brigantie	149	New York to Cuba	Dauphin's Point, St. Lucas, B.W.I.	Tide and fog....	Total...	4,000
Aug. 14 Ontario	15	Charlottetown	Schooner	43	North Sydney to Chatam, N.B.	Sydney Harbour	do	Partial	300 cargo 70
do 5 Orient	15	Gloucester, Mass.	do	89	Gloucester fishing	Little Rustico, P.E.I.	do	do	350
do 6 Orion	31	Gaspé	do	26	Gaspé to Anticosti	Seacot River, Anticosti	do	Total...	400
do 14 Ornatus	5	Lunenburg	do	90	Halifax, fishing	St. Ann's Banks	Miscellaneous.	Partial	200 cargo 100
..... Osces	16	Charlottetown	Barque	508	Savannah to Newcastle, G.B.	Atlantic Ocean	Ship abandoned at sea owing to leaks and other damage.	Total...	20,000
May 5 Ossipee	18	Gloucester,	Schooner	69	Gloucester, fishing	S. E. Breakers, County Harbour, N.S.	Struck on rock, slid off and sunk.	do	30,000 cargo 800
Oct. 9 Oxenholme	25	Liverpool, G.B.	Steamer	1755	Liverpool, G.B., to Montreal.	Grosse Isle, St. Lawrence River.	Stranding—mistaking lights.	No loss.	.....
June 8 Parisian	8	Lunenburg	Schooner	107	Lunenburg to Magdalen Islands.	Magdalen Islands.	Carried away foresail and rudder.	Partial.	200
Aug. 25 Parker M. Whitmore.	9	United States.	Ship	2205	Bristol, Eng., to Delaware Breakwater.	Shelburne County, Nova Scotia.	Thick weather	Total...	85,000
Sept. 16 Princess Beatrice.	16	Glasgow, G.B.	Steamer	270	Halifax to Isaac's Harbour.	Near Isaac's Harbour, N.S.	do	do	20,000
June 15 Prospect	18	Charlottetown	Schooner	21	Charlottetown to Wood Island.	Little Sands	Foundering	do	700
April 23 Restive	6	do	do	72	Boston to Port Hastings.	Hast. Strait of Canso.	Jammed by running ice, lost rudder and damaged hull.	Partial.	300
..... Richard Thompson.	17	do	do	53	Pictou to Summerside.	Straits of Northumberland.	Unknown	Total...	800
Mar. 31 Robert Ross	17	St. John, N.B.	do	123	St. John to New York.	Mark Island Reef, Maine, U.S.	Land sand reef and no buoy.	Partial.	1,600 cargo 200

STATEMENT of Wrecks and Casualties to Sea-going Vessels, &c.—*Continued.*

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1890.												
Aug. 28	Roderick MacRae.	21	Baddeck, C.B.	do	75	Sheet Harbour to Halifax.	Not heard from after sailing.			4	Total...	400 180 cargo
Mar. 16	S. K. F. James.	17	St. John, N.B.	do	99	St. John to North Haven, N.B.	Mark Island Ledge, Maine, U.S.	Stranding	Chains parted.		do	1,700
Feb. 8	Saint John.	9	do	do	248	Brazil to Philadelphia.	37° N., 72° W., Atlantic Ocean.	do	Heavy weather		Partial.	500 700 400 cargo
Oct. 17	Sarah A. Townsend.	6	Halifax	do	149	Louisburg to Halifax.	Lennox Passage, C.B.	Did not give shoal sufficient berth.			do	25 cargo
do	Sarah E. Lee.	4	Gloucester, Mass., U.S.	do	98	Gloucester, fishing.	Arichat Harbour.	Stranding	Dark and missed buoy.		do	80
Mar. 31	Sarah Godfrey.	7	Dorchester.	do	185	Rio Grande de Sol to Barbados.	South Atlantic.	Abandoned; heavy sea carried masts and sails away.			Total...	5,000
Feb. 7	Sarah Wallace.	17	St. John, N.B.	Brigantine	216	St. John to New York.	Bliss Harbour, N.S.	Stranding	High winds.		Partial.	400
June 13	Sardonys.	21	Victoria, B.C.	Steamer	311	Victoria to Charlotte Island.	Off Cape Ball.	do	Compass affected.		Total...	50,000
April 26	Scotia.	12	Banff, G.B.	Schooner	129	Liverpool, G.B., to Harbour Grace, Nfld.	51° 18' N., 22° 28' W.	Thrown on beam ends in a hurricane, crew taken off by Stmr. "Invermay," and landed at Pictou.			do	5,000
Jan. 21 1889.	Scotland.	9	Windsor	Barque	1499	Antwerp to New York.	In the Downs, G.B.	Damaged.	Gale.		Partial.	300
Dec. 22	Scylla.	6	Lunenburg	Schooner	102	Liscomb to Fortune Bay.	Guy'sboro', N.S.	Stranding in a thick snow storm.			Total...	4,000

May 19	Sea Foam.....	20	Lubec, Maine.	Schooner.	70	Magdalen Islands to Entrance to Lubec, Maine.	Struck on a rock.	Partial	200 800 cargo
.....	Seraphin.....	32	Digby, N.S.	do	119	New York to Bear River, N.S.	.....	Partial.	20
June 9	Silver Bell.....	22	do	do	34	Charlottetown to Chatham, N.B.	Too little ballast.	do	70
Oct. 17	Sir C. Tupper..	19	St. John's, Nfld.	do	81	N. Sydney to Catalina, Nfld.	Stranded	Total	1,600 250 cargo
Aug. 14	Skjoldmoen....	10	Norway	Brigantine	282	Richibucto to Plymouth, G.B.	do	Partial.	3,000
Mar. 21	Stella.....	12	Yarmouth	Schooner	24	Red Head to Beaver Harbour.	do	Total	500 40 cargo
April 4	Straits of Gibraltar.	6	Glasgow, G.B.	Steamer	1971	Northfleet, G.B., to New York.	Striking ice on starboard bow.	Small.	.....
July 31	Susie E.....	8	Halifax	Schooner	98	Glance Bay to St. John, N.B.	Off Marie Joseph, C.B. Stranded	Total	3,500 500 cargo
Oct. 20	Susie Prescott..	23	St. John, N.B.	do	99	Hillsboro' to Boston.	Month of Petitcodiac River.	Total	2,000 187 cargo
Oct. 7	Swallow.....	1	do	do	90	St. John to Bridgeport.	Off Point Lepreaux Light.	Partial.	200
Jan. 22	Tanjore.....	12	Quebec	Barque	915	St. John, N.B., to Swansea, Wales.	Little River, Maine, Stranded	Serious.	.....
Oct. 6	Thistle.....	3	do	Schooner	114	St. John's, Nfld., to Sydney, C.B.	Eight miles N.E. of Low Point Light.	Partial.	300
.....	Thornholm.....	9	Marypport.	Steamer	1376	Pictou to Montreal.	Barrett's Ledge, St. Lawrence.	.....	.....
Sept. 13	Three Bells.....	6	Shelburne	Schooner	92	Canso, fishing.	Near Tor Bay Light.	.....	.....
June 8	Tinten.....	34	.....	Barque	639	Brake to Miramichi	Magdalen Islands.	Partial.	250
March 6	Tiogo.....	1	Lunenburg	Schooner	93	Boston to Liverpool, N.S.	Liverpool Harbour.	Total	8,000
Aug. 27	Twilight.....	15	Parrsboro'	do	49	Port Greville to Advocate Harbour, N.S.	On beach loading; gale came on, drove her up & smashed the vessel to pieces.	do	5,000
								do	700

STATEMENT of Wrecks and Casualties to Sea-going Vessels, &c.—*Concluded.*

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. — Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1890.												
Aug. 26	Ulmuda.....	5	West Hartle- pool, G.B.	Steamer..	1160	St. John to Halifax...	Brier Island, N.S.....	Stranding	Fog and cur- rent.	Total	Total	125,000
June 4	Umpire	25	Halifax	Schooner..	64	Digby to Rockland, Me.	Off Mount Desert, Maine, U.S.	do	Thick fog.	do	do	500
July 5	Unique	3	Boston, Mass., U.S.	do	75	Gloucester, fishing	Tusket Islands, N.S....	do	do	do	do	cargo 95
Aug. 28	Unto	24	Norway	Brig	616	Campbellton to Swan sea.	Nouvelle East, N.B....	do	Fog and strong tides.	do	do	cargo 5,000
Aug. 15	Valiant	9	Lunenburg	Schooner..	88	Canso, fishing	On N. edge of Banquers	Sprung a leak.	do	do	do	cargo 20,000
1889.												150
Nov. 17	Vancover	14	Liverpool, G.B	Steamer ..	5141	Montreal to Liverpool.	River St. Lawrence....	Stranding	do	do	do	do
1890.												
Aug. 10	Vancover	21	Yarmouth, N.S	Ship	1376	St. John, N.B., to Liv- erpool, G.B.	Schooner Pond, C.B ..	Touched grind in a thick fog.	do	do	do	do
Oct. 18	Velocipede	21	Gloucester, Mass.	Schooner..	104	Gloucester, fishing	Louisburg Harbour	(got in too close to shore in a gale & thick weather.	do	Total	Total	2,500 cargo 4,000
Sept. 1	Vidette	17	Port Hawkes- bury.	do	58	Canso to Port Hawkes- bury.	Five miles N. of Canso Harbour.	Stranding	Storm	Partial..	Partial..	80
April 4	W. D. Richard.	1	Lunenburg	do	98	La Have to Halifax	Off Campedown	Capsized by a heavy squall.	do	do	do	800
Oct. 26	Waterside	1	St. John, N.B.	3-m. Schn.	161	Cow Bay to Bathurst.	Langley's Point, Strait of Canso.	Ran too close to shore in beat- ing through strait.	do	do	do	200 cargo 80
Aug. 27	Wave	27	do	Schooner..	43	Apple River to St. John N.B.	Cape Spencer, N.B.....	Stranding	Gale	4 Total	4 Total	250
do 29	William	14	Charlottetown	Steamer ..	130	Sydney to Chatham, N.B.	Cape Tormentine Reef.	Stranding, ran on shoals.	do	do	Partial..	cargo 344
Sept. 23	Willie B	14	Liverpool, N.S	Schooner..	38	Magdalen Islands, fish- ing.	Eighteen miles S. of Magdalen Islands.	Stranding ...	Heavy sea	do	do	350 cargo 75

STATEMENT of Wrecks and Casualties reported as having occurred in Canadian Inland Waters, for the Eleven months ended 31st October, 1890.

Date of Casualty.	Port of Registry.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Live Lost.	Total or Partial Loss.	Amount.
1890.												
Apr. 17	Alma Munro...	17	Port Stanley.	Steamer..	581	Kingston to Chicago...	Foot of Lake Ontario.	Struck on a shoal and broke rudder			Partial..	500
.....	Blanche.....	14	Napanee.....	Schooner..	92	Brighton to Oswego...	Lake Ontario.....					
Nov. 22	Calumet.....	.....	United States.	Steamer..	1400	Buffalo.....	Bar Point, Lake Erie.	Struck on a sunken anchor.			Total...	5,000 cargo
1890.												
Oct. 17	Geo. R. Clinton	.....	do	Schooner..	320	Toledo to Kincardine.	Near Kincardine Harbour.	Stranding	Heavy gale, vessel missed stays and would not answer helm.		Total...	3,200 cargo
July 16	Isaac May.....	18	Toronto...	Steamer..	392	Port Colborne to French River.	Off Port Stanley, Lake Erie.	Fire			do	20,000
May 17	Jessie H. Breck.	17	Kingston...	Schooner..	305	Port Dalhousie to Kingston.	Off Nine Mile Point, Simcoe Island.	Foundered...	Gale and heavy sea.	5	do	5,000
Sept. 8	Keewatin...	2	Winnipeg...	Yacht.....	.....	Warren's Landing to Red River.	North of Egg Island, Lake Winnipeg.		Lack of hydrographic map of lake.	2		
May 12	McArthur.....	13	Kingston...	Steamer..	83	Collin's Bay wharf	Collin's Bay wharf...	Fire			Total...	20,000
Sept. 8	North Star...	4	Winnipeg...	Barge.....	172	Selkirk to Grand Rapids.	Near Reindeer Island, Lake Winnipeg.	Struck on unknown reef, caused tug to leave barge.	Gale.....			
Oct. 22	Reliance.....	9	Napanee...	Steamer..	169	Deseronto to Oswego.	Near False Ducks Light	Collision...				
do	Two Brothers...	22	Port Hope...	Schooner..	122	Deseronto to Oswego.	Opposite Glenora	do				
May 14	Wales.....	9	Toronto...	Steamer..	238	Muskoka Mills to Tonawanda.	Niagara River	do			Partial..	5,000

SUPPLEMENT to the Statement of Wrecks and Casualties reported as having occurred on the Inland Waters of Canada during the Calendar Year of 1889.

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. — Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1889.												
Nov. 8	Annie Watt...	5	Owen Sound...	Steamer...	42	Lion's Head to St. Ed. munds.	Georgian Bay...	Burned...	.....	.....	Partial...	3,500 cargo 500
June 19	Champion	17	Quebec...	do ..	90	Quebec to Montreal...	Off Green Island ..	Lost propeller.	.....	.....	do ..	400
July 27	do	17	do	do ..	90	do	Quebec Harbour ..	Crank shaft broken.	.....	.....	do ..	400
Aug. 16	do	17	do	do ..	90	do	Near Grosse Isle ..	Broke rudder.	.....	.....	do ..	100
Nov. 28	Clara White...	18	Kingston...	Schooner..	63	Grenadier Island at anchor.	Grenadier Island...	Burned...	.....	.....	Total...	1,600
Oct. 6	Damtleess	18	Quebec...	Steamer...	35	Lodel to Quebec...	Near Platon	Stranded...	.....	.....	Partial..	150
Nov. 26	Gleniffer.	16	St. Catharines	Schooner..	314	Fair Haven to Toronto	Minico Point, Lake Ontario.	Stranding	Loss of fore- mast.	.....	Total...	8,000 cargo 2,000
June 12	L. N. G.	2 mos	Montreal...	Steamer...	25	Quebec...	Quebec Harbour...	Run down by Str. "Mon- treal."	.....	1	do	8,000
Nov. 28	Marie Erzalie...	22	Quebec...	Schooner..	111	do	Louise Basin...	Damaged by hurricane.	.....	.....	Partial..	300
Sept. 12	Myra...	5	Prescott	Steam tug.	36	Ogdensburg to Prescott	Near Prescott...	Collision with "Rothsday."	.....	2	do ..	600
Nov. 28	Orleans	7	Quebec...	do ..	181	Quebec	Quebec	Damaged by hurricane.	.....	.....	do ..	50
June 8	Quebec	24	Montreal...	Steamer...	1794	Montreal to Quebec	Lévis	Collision with wharf.	.....	.....	.....	.....

Nov. 26	Ranger	1	Kingston	do	8	Docked at Kingston	Kingston	Fire	Partial.	275
do	17 St. Francois Xavier.	11	Quebec	Schooner.	34	Cacouna to Quebec	Near Grosse Isle.	Collision with Str. "Good Interest."	do	50
Sept 27	Starlight	2	Windsor	Steamer	10	Walkerton to Chatham	Chatham, Ont	Sea cock pipe of the engine left open.		
Nov. 28	Vega	5	Quebec	do	132	Quebec	Quebec	Hurricane	Partial.	40
Jan.	Addie Benson	17	Sydney, C.B.	Brigantine	327	Port Medway to South America.	Never heard from after sailing from Port Medway.		Total & cargo.	15,000
Aug. 8	Advance	5	Halifax	do	234	Perth Amboy to St. John's, P.R.	Never heard from after sailing from Port Medway from Perth Amboy.		do	17,000
June 23	Algeria	5	Lauenburg	Schooner	110	Trepenny, Nfld. to Cape Royal.	Brues Cove, Nfld.	Stranding	do	6,600
Sept. 11	Alpine	22	St. John's, Nfld	do	76	Red Bay to Montreal	Meccantina Islands	do	Partial.	200
Nov. 6	Amphion			Barque		Esquimaux, B.C. to Vancouver.	Kellett Bluff	do	do	Unknown.
Dec. 6	Angelique	18	St. Malo	Brigantine	181	Sydney, C.B. to Port au Basque.	Port au Basque.	do	Total	do
Nov. 28	Annie	10	St. John's, Nfld	Schooner	62	Glace Bay to St. John's, Nfld.	Glace Bay	Sunk	Total & cargo.	1,200
do	11 Annie G.	3	St. John, N.B.	do	112	New York to Yarmouth	Bay of Fundy	Unknown	Partial.	1,000
Sept. 9	Atwood	13	Annapolis	do	118	Jamaica to Boston	During voyage.	do	do	900
Dec. 20	Bessie Parker	1	St. John, N.B.	do	227	Boston to St. John, N.B	Coast of Maine.	Stranding	do	1,000
Aug. 21	C. E. White	3	do	do	227	Digby to Cienfuegos	Not heard from since sailing		8 Total & cargo.	15,300
Nov. 20	C. W. Redmond	3	Halifax	do	92	Halifax to Jamaica.	During voyage.	Drive on her beam end.	Partial.	
Sept. 18	Canopus	18	Liverpool, G.B	Steamer	2808	Montreal to Liverpool	45° 50' N. Lat., 63° 36' W. Long.	Fire	do	75,000 cargo 50,000
Oct. 1	do	18	do	do	2808	Quebec to Liverpool	St. Valier's Reef	Stranding	do	50,000 cargo 20,000

SUPPLEMENT to the Statement of Wrecks and Casualties reported as having occurred to British, Canadian, and Foreign Sea-going Vessels during the Calendar Year of 1889—*Continued.*

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. — Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1889.												
Nov. 17	Cartlaginian	5	Glasgow	do	2755	Montreal to Liverpool.	Cap Santé	do			Slight.	
Oct. 9	Christina Moore	9	Windsor, N.S.	Schooner	216	St. Catharines to Monte Video.	River La Platte	Damaged	Gale		Partial.	200
June 4	Cerilly	12	Quebec	do	64	Quebec to Pentecost.	Pentecost River.	Stranding			do	2,000
May 20	Charles Duncan	6	Halifax	Brigantie	149	Halifax to Kingston.	Atlantic Ocean	Damaged	Gale		Partial.	Unknown.
Aug. 31	Conductor	7	Lunenburg	Schooner.	114	Turk's Island to Lunenburg.	Never heard from after leaving Turk's Island			7	Total.	5,000 cargo 400
May 20	Cyprus	12	St. John, N.B.	Ship.	1091	Doilo to Montreal	China Sea.	Damaged.	Gales		Slight	100
Aug. 11	Deddington	new	Hull, G. B.	Steamer	1411	Glace Bay to Quebec.	Matane Reef	Stranding	Currents.		Partial.	
Aug. 19	E. Hodgson	26	Charlottetown	Schooner.	38	Magdalen Islands to Souris, P. E. I.	East Point Reef.	Disasted	Gale		do	500
Nov. 28	Echo	5	St. John, N.B.	Brigantie	354	St. John to New York	12 miles east of Mount Desert Rock.	Damaged	Squall		do	50 cargo 360
June 9	Ecuador	14	Yarmouth	Barque	1059	Buenos Ayres to Bahados.	Cape Castello, Brazil.	Stranding	Thick weather		Total.	20,000
Nov. 18	Electrique	22	Havre	Steamer	2099	Antwerp to Montreal.	Pointe aux Trembles.	do				
Nov. 23	Ella Maud.	4	Moncton	Schooner.	160	Hillsboro' to New Haven.	Nr. Grindstone Island, Bay of Fundy.	do	Gale		Partial.	300
May 20	Escalona	5	Dundee	Steamer	1234	Quebec to Montreal.	Near St. Croix Light.	do	Incapacity of pilot.		do	21,000

Mar.	1	Evangeline.....	11	Weymouth.....	Schooner..	95	Weymouth to bados.	Bar-100 miles S.W. of Seal Island.	Miscellaneous.	Sprung a leak.	Total	1,500
Oct.	—	Favonius.....	6	St. John, N.B.	Ship..	1526	Yokohama to Francisco.	China Sea.	Rudder dam- aged.	Typhoon....	Partial..	1,000
Nov.	22	Flash.....	9	do	Schooner..	96	St. John to Boston....	Davis Island.....	Collision with U. S. schr. Nellie Doe.	.....	Slight...	35
Nov.	14	Frank L. P....	9	do	do	125	St. Pierre.....	Wharf at St. Pierre....	Damaged....	Gale.....	Partial..	2,500
Feb.	6	Fred. B. Taylor	6	Yarmouth....	Ship.....	1798	Yokohama to Phil- pine Islands.	Point Rubicon, Japan.	Stranding....	Winds and currents....	do	30,000
June	20	Frederica.....	5	St. John, N.B.	Barq'rine	449	St. John to Ireland....	Atlantic Ocean.....	Damaged....	Hurricane....	do	5,000
Oct.	1	Geographique..	19	Antwerp....	Steamer...	2866	Montreal to South-40 ampton.	miles from St. Pierre Miquelon.	Run into and sunk by the Minnie Swift.	.....	Total...	85,000 cargo 35,000
Aug.	4	Helen Churchill	10	Shelburne....	Brigantine	112	Halifax to Lockeport..	Liverpool, N.S., Har- bour.	Stranded....	Fog.....	Slight..	20
Nov.	17	Hope.....	22	Windsor.....	Schooner..	85	Parrsboro' to Salem....	Saco River, Maine, U.S.	Struck.....	Darkness....	Partial..	300
181	do	Idaho.....	23	United States.	Brig..	800	Port Townsend to Port- land, Oregon.	Rondale Reef, B.C....	Stranding....	Fog.....	Total...	10,000
do	27	Jane Ingram....	3	St. John, N.B.	Schooner..	155	New York to Pictou....	Entrance to Canso Har- bour.	do	.....	Slight..	100
do	28	Jewel.....	14	Lunenburg...	do	52	Port Hawkesbury to Near Georgetown, P.E.I.	Grand River, P.E.I.	do	Defective com- pass.	.....	.....
Oct.	—	John Tyler.....	43	St. Andrew's, N.B.	do	76	Parrsboro' to St. John, N.B.	Spencer's Island.....	Damaged....	Gale.....	.....	.....
Dec.	14	Kelso.....	10	Yarmouth....	do	111	Liverpool to Yarmouth, N.S.	West Head, N.S.....	Burnt.....	.....	Total...	1,800 cargo 500
Sept.	14	Lark.....	11	Halifax.....	do	17	Mahone Bay to Halifax	Shad Bay.....	Stranding....	.....	Total...	400
Nov.	26	Lodi.....	16	Pictou, N.S....	do	49	Summerside to Pictou.	Malaguash Point, N.S.	do	Missed stays....	do	700
Dec.	8	Lord Douglas...	32	Gaspe.....	do	88	Gaspe to Barachois....	Entrance to Barachois.	Struck on bar.	.....	do	200
Sept.	13	Loyalist.....	6	St. John, N.B.	Brigantine	348	Cuba to Delaware Breakwater.	Delaware Breakwater..	Damaged....	Gales.....	Partial..	14,000
Dec.	20	M. L. St. Pierre	18	do	do	98	Boston to St. John....	White Head, Maine, U.S.	Stranding....	Thick weather....	Total...	1,200

SUPPLEMENT to the Statement of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels, during the Calendar Year of 1889—*Continued.*

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from. Port bound to.	Place Where Casualty Happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1889.												£
Nov. 20	Matilda.....	5	Barrington ..	do ..	80	Canso to Barrington...	Cape Sable Island, N.S.	do ..	do ..	.....	do ..	3,000
Oct. 8	Mastola.....	18	Christiana.....	Barque...	583	Maryport to Quebec...	Fish Rocks, Nfld.....	Stranded ..	.....	.....	do ..	10,000
Sept. 17	Maude	6	Lunenburg ..	Schooner ..	14	Indian Harbour to Modesty Cove.	Patty's Head, N.S.....	do ..	Heavy sea ..	.....	do ..	700
do 14	May Bell	15	St. John, N.B.	do ..	76	Indiantown to Rock-land, Me.	St. John Harbour	do ..	Tide .....	.....	Partial..	160
Oct. —	Miranda	6	Liverpool, G. B.	Steamer ..	733	New York to Halifax..	Off Nantucket shoal...	Lost boats..	Gale .....	.....	do ..	150
May 31	Napoleon III ..	34	Christiana.....	Barque....	741	Quebec Harbour.....	Gross Isle	Collision with str. "Chal-louge."	.....	.....	Partial..	800
Oct. 20	Northern Em-pire,	9	Windsor, N.S.	do ..	950	Liverpool to Rio de Janeiro.	Rio de Janeiro	Collision with another ship.	.....	.....	do ..	4,000
Nov. 26	Nylgham	8	Yarmouth.....	Ship.....	1252	Singapore to Hong Kong.	Prattas Shoal, China Sea	Stranding ..	.....	7	Total ..	32,000
do 26	Ocean Belle ..	20	Digby	Schooner ..	104	Boston to Port Gilbert.	Booth Bay, Maine, U.S.	do ..	Gale	1	do ..	1,400
Sept. 21	Olivia A. Carri-gan.	12	Halifax ..	Brigantife ..	350	Vera Cruz to Philadelphia.	Fontara	do ..	Cyclone ..	.....	do ..	10,000 500 cargo
Nov. 9	Oriole	10	Victoria	Schooner ..	12	Vancouver to Westminster.	New 3 miles S.E. of Point Grey.	do ..	Stress of weather.	.....	do ..	1,200
do 27	Oscar Wyldes...	7	St. John, N.B.	Steamer ..	7	Gagetown to St. John, N.B.	1 mile above Indian-town, N.B.	do ..	Eccentric rods broken.	.....	Partial..	500

Aug. 30	Polino.....	20	Quebec.	do	524	Cow Bay to Montreal.	Portneuf Sands.....	do	Thick weather.....	do	1,000 cargo 200
do	15 Polinian.....	12	do	Ship.....	1294	Mauritius to Montreal.	Indian Ocean.....	Put back leak- ing.	Condemned and sold.	Total...	10,000
July	5 Pontecorvo.....	37	Christiana...	Barque.....	526	Quebec to Glasgow.....	Beaumont Shoals	Stranding.....	No loss.	No loss.	880
June	22 Queen of the North.	29	Newcastle, G. B.	G. Ship.....	1668	At anchor, Quebec Har- bour.	Quebec Harbour.....	Collision with ss. "Brats- berg."	Partial.	Partial.	880
Dec.	6 Regina.....	12	Yarmouth.....	Schooner.	57	Lunenburg to Pubnico.	Raynes Pt., N.S.....	Stranding.....	Thick fog.....	Total...	1,200
do	16 Russia.....	9	Chatham, N. B.	Bark.....	768	St. John, N.B., to Lon- donderry.	About mid ocean.....	Lost deck load.	Gale.....	No dam- age.	500 cargo
Nov.	27 Rustler.....	5	Victoria, B.C.	Sloop.....	31	Nanaimo to Portez Is- land.	Nelson Island.....	Stranding.....	Tide.....	Partial.	2,000
do	19 St. Francis.....	1	St. Johns, Nfld	Schooner.	82	St. John to Souris, P. E.I.	Near Cape Ball, Nfld.	Damaged rig- ging.	Gale.....	Slight...	50
do	27 S. J. Musson...	12	Halifax.....	Brigantie	128	Janaica to Halifax.....	North side of Grand Cayman Island.	Stranding.....	Dismantled.....	Total...	4,000
do	28 S. K. F. James.	17	St. John N.B.	Schooner.	99	Fox Island to Boston, Mass.	Fox Island, Maine.....	Damaged.....	Gale.....	Partial.	950
Sept.	17 Sarah Wallace	16	St. John.....	Brigantie	216	Les Palmas to Sydney.	Near Sydney, C.B.....	Stranding.....	High winds.....	Slight...	150
Nov.	28 Scotian.....	23	Halifax.....	Schooner.	44	Canso to Georgetown, P.E.I.	Botham Beach, P.E.I.	do	Gale.....	Total...	500
do	6 Speedwell.....	6	St. John.....	do	82	Providence to St. John.	Long Island, U.S.....	Collision with schr. "Swal- low."	Partial.	Partial.	700
do	6 Swallow.....	1	do	do	90	St. John to Providence, R.I.	Near Long Island, U.S.	Collision with schr. "Speed- well."	do	do	500
do	29 Tasmania.....	5	Charlottetown	Brigantie	249	Sagna to Delaware Breakwater.	Delaware Breakwater.	Collision with schr. "Ma- rion Manson"	do	do	400
Sept.	10 Thomas Keillon.	14	Dorchester, N.B.	Barque...	1095	Philadelphia to London	Delaware Bay, U.S.....	Stranding.....	Gale.....	Total...	20,000
1888.	Union B.....	14	Windsor, N.S.	Schooner.	20	Apple River to Port Lorne.	Port Lorne.....	Damaged.....	Steering gear broke.	do	300

SUPPLEMENT to the Statement of Wrecks and Casualties reported as having occurred to British, Canadian and Foreign Sea-going Vessels during the Calendar Year of 1889—*Concluded.*

Date of Casualty.	Name of Vessel.	Age.	Port of Registry.	Rig.	Register Tonnage.	Port sailed from.— Port bound to.	Place where Casualty happened.	Nature of Casualty.	Cause of Casualty.	Lives Lost.	Total or Partial Loss.	Amount.
1889.												
Sept. 3	Victoria	new	Lanenburg ..	Brigantine	143	Martinique to Providence.	N. Lat. 25° 30'; W. Long. 68° 33'.	do	Hurricane ..	.....	Partial.	800
do	Victory	10	Halifax	Schooner..	88	Sheet Harbour to Newfoundland.	Atlantic Ocean.	Leak .....	.....	.....	do	300
Dec. 12	Virgin Belle	6	St. John's, Nfld	do ..	57	Sydney to Lapeolle, Newfoundland.	Sydney Harbor.	Sank	Leak .....	.....	Total ..	2,400
do	Wallace	17	Pugwash	do ..	59	Sydney to Port Hastings.	Port Hawkesbury	Sank in dock.	Gale .....	.....	Slight.	60
June 30	Wave	4	Halifax	do ..	19	Halifax to St. Peter's, P. E. I.	St. Peter's Bar	Stranding ..	Channel filled up with sand	.....	Total ..	600 600 cargo
Dec. 3	W. E. Wier	18	Arichat, N.S.	do ..	41	Jeddore to Arichat.	White Head, N.S.	do	Snow squall.	.....	Partial.	225 100 600 700 4,000 cargo cargo cargo
do	Willie A.	9	Yarmouth	do ..	70	Boston to Sydney, C. B.	St. Peter's Bay, N.S.	do	.....	.....	do	
July 15	Wilmslow	31	New York	Ship	1626	St. John to Liverpool, C. B.	Atlantic Ocean	Sprung a leak.	Side lights not secured.	.....	do	
Aug. 25	Zephyr	14	Halifax	Schooner..	27	Souris, P. E. I., fishing.	3 miles north of East Point.	Stranding ..	Currents .....	.....	do	

APPENDIX No. 20.

REPORT OF THE HARBOUR COMMISSIONERS OF TORONTO, FOR THE
CALENDAR YEAR ENDING 31ST DECEMBER, 1890.

SECRETARY of the Toronto Harbour Trust in Account with the Commissioners for
1890.

DR.		GENERAL BALANCE SHEET.		CR.	
1890.		\$	cts.	1890.	
Dec. 31	Wharf property	43,072	02	Dec. 31	By Overdraft at bank
do 31	Elevator	10,250	00	do 31	Profit and Loss
do 31	Office furniture	844	21		
do 31	Cash in hand	11	17		
		54,177	40		

We have examined the books, accounts and vouchers, and have compared the balance sheet, as above, with the books, &c., and certify the same to be correct, and to represent a true statement of the affairs of the Trust to 31st December, 1890.

COLIN W. POSTLETHWAITE.

Deputy Harbour Master.

MORGAN BALDWIN.

Harbour Master.

C. B. GRASETT, }
W. R. HARRIS, } *Auditors.*

ARTHUR B. LEE, *Chairman.*

A. M. SMITH,

JOHN H. G. HAGARTY,

J. McMULLIN.

GEORGE VERRAL,

Commissioners.

TORONTO, 6th January, 1891.

RECEIPTS and Expenditure of the Toronto Harbour Trust for the Year 1890.

1890.	RECEIPTS.	\$ cts.	1890.	EXPENDITURE.	\$ cts.
Jan.	1 Cash on hand.....	4 90	Jan.	1 Overdraft at Bank of Toronto.	5,346 04
Dec.	31 Canadian Pacific Railway Co.	3,000 00	Dec.	31 Dredging.....	6,773 90
do	31 Harbour dues.....	9,740 27	do	31 New breakwater.....	3,359 00
do	31 Rent.....	18 00	do	31 Salaries.....	2,600 00
do	31 Overdraft at Bank of Toronto.	7,378 04	do	31 Office expenses and rent.....	563 41
			do	31 Interest.....	335 95
			do	31 Lights, buoys and beacons....	302 39
			do	31 Charges.....	300 00
			do	31 Solicitors' fees and law expenses	257 15
			do	31 Insurance.....	128 00
			do	31 Printing and stationery.....	58 85
			do	31 Repairs at Queen's Wharf....	28 15
			do	31 Engineer's fees.....	25 00
			do	31 Ottawa agent.....	25 00
			do	31 Wood and coal.....	22 70
			do	31 Addition to office furniture....	4 50
			do	31 Cash on hand.....	11 17
		20,141 21			20,141 21

Examined and found correct.

C. B. GRASSETT.

W. R. HARRIS,

Auditors.

TORONTO, 6th January, 1891.

STATEMENT of Accounts in Detail.

1890.		OFFICE FURNITURE.	\$ cts.	\$ cts.
Jan.	1	Account as per ledger.....	839 71	
Oct.	31	One frame for water register.....	4 50	844 21
		PROPERTY.		
D c.	31	Account as per ledger.....		43,072 02
		INTEREST.		
Dec.	31	Interest on overdraft at bank.....		335 95
		INSURANCE.		
Jan.	22	Premium on lighthouses.....	8 00	
July	31	do elevator.....	120 00	128 00
		DREDGING.		
		J. Conlan, as per contract.....	6,220 10	
		Engineer's fees.....	310 00	
		Chief Clerk's salary.....	164 00	
		Advertising for tenders.....	79 80	6,773 90
		CHARGES.		
Jan.	8	Commissioners' and auditors' fees.....		300 00
		PRINTING AND STATIONERY.		
Jan.	31	"Mail," account for Annual Statement.....	17 50	
Mar.	10	Rolph, Smith & Co., account for plans.....	5 00	
Jan.	30	"Mail" account, 250 posters.....	9 50	
July	10	Grand & Toy, account for foolscap.....	4 75	
Aug.	26	Copp, Clark & Co., account for receipt book.....	7 00	
Dec.	31	Petty cash, postage, &c.....	15 00	58 85
		SALARIES.		
Dec.	31	Morgan Baldwin, Harbour Master.....	1,200 00	
do	31	C. W. Postlethwaite, Deputy Harbour Master.....	800 00	
do	31	Captain A. Taylor, Lighthouse Keeper.....	600 00	2,600 00
		COAL AND WOOD.		
Feb.	28	1 ton coal, Ontario Coal Co.....	5 50	
June	30	1 do do.....	5 90	
Dec.	22	do do.....	11 30	22 70

STATEMENT of Accounts in Detail—*Concluded.*

1890.	LIGHTS, BUOYS AND BEACONS.	\$ cts.	\$ cts.
Apr. 21	F. Jackman, packing buoys, per contract.....	70 50	
do 21	J. B. Allen, & Co., paint for buoys.....	12 56	
do 30	K. Evans, surveyor, taking bearings.....	5 00	
June 18	J. B. Smith, 7 new buoys and repairing 5 old buoys.....	73 87	
July 28	St. Lawrence Foundry, for 9 anchors.....	58 13	
do 28	Captain Taylor, for painting spar buoys.....	14 00	
Dec. 11	F. Jackman, lifting buoys, per contract.....	77 50	
do 11	Captain Taylor, lifting buoys, per contract.....	9 00	
do 24	Gas for lighthouses for year.....	75 83	
do 31	Petty cash, posting bills, &c.....	6 00	
		402 39	
Apr. 8	By cash from Water Works Department.....	100 00	302 39
	OFFICE EXPENSES.		
Jan. 10	Assistant clerk.....	7 00	
Oct. 8	Rent of 2 telephones for year.....	100 00	
Dec. 31	Rent of office for 12 months.....	399 96	
do 31	To cleaning office for 12 months.....	36 00	
do 31	Petty cash.....	20 45	563 41
	ELEVATOR.		
Dec. 31	Account as per ledger.....		10,250 00

DR.

PROFIT AND LOSS.

CR.

1890.	\$ cts.	1890.	\$ cts.
Dredging.....	6,773 90	Balance per Ledger, folio 411.....	48,820 59
New breakwater.....	3,359 00	Harbour dues.....	9,740 27
Salaries.....	2,600 00	Canadian Pacific Railway Company .	3,000 00
Office expenses and rent.....	563 41	Rents.....	18 00
Interest.....	335 95		
Lights, buoys and beacons.....	302 39		
Charges.....	300 00		
Solicitor's fees and law expenses.....	257 15		
Insurance.....	128 00		
Printing and stationery.....	58 85		
Repairs at Queen's Wharf.....	28 15		
Engineer's fees.....	25 00		
Ottawa agent.....	25 00		
Wood and coal.....	22 70		
Balance at credit of Profit and Loss..	46,799 36		
	61,578 86		61,578 86

Examined and found correct.

C. B. GRASETT,
W. R. HARRIS,
Auditors.

TORONTO, 6th January, 1891.

COMPARATIVE STATEMENT.

Goods arrived per Steamer and Vessel for the Years 1889 and 1890.

Description of Goods.		1889.	1890.
General merchandise.....	Tons.	11,427 $\frac{1}{4}$	10,798 $\frac{1}{4}$
Coal.....	do	166,316	160,132
Horses, cattle and carriages.....		392	454
Crain and pulse.....	Bush.	148,190	116,850
Building stone.....	Tons.	7,096	5,641
Moulding sand.....	do	584	794
Laths and hoops.....		189,000	100,000
Wood.....	Cords.	725	564
Stone.....	Toise.	3,447	3,172 $\frac{1}{2}$
Fruit.....	Brls.	10,065	1,697
do.....	Boxes.	3,825	4,223
do.....	B'sk'ts	111,768	75,100
do.....	Bags.	440	59
Lumber.....	Ft., B.M.	1,005,500	574,500
Bricks.....		47,000	200,000

COLIN WM. POSTLETHWAITE,
Deputy Harbour Master.

TORONTO, 6th January, 1891.

FORTIETH ANNUAL REPORT.

To the Commissioners of the Harbour of Toronto:—

GENTLEMEN,—I have the honour to lay before you my annual report for the year 1890.

The ice left the Bay on the 15th of March, the same date as the previous year. The Bay was lightly frozen over the night of the 24th December, but was broken up on the 25th. It was frozed again on the 28th, was partly broken up next day, and remained open for the balance of the year.

The first vessel to arrive was the schooner "Speedwell," with 437 tons of coal, from Charlotte, for the Ontario Coal Company. The captain, J. Williams, got the customary hat. The last vessels to arrive were the "Flora" and the "Una," with stone, on the 23rd December.

The number of arrivals at this port was 2,404, an increase of 91 on the number last year.

	1890.	1889.		
Steamers loaded.....	1210	961	... Increase.....	249
do light.....	1	5	... Decrease.....	4
Propellers loaded.....	80	79	... Increase.....	1
do light.....	110	105	... do.....	5
Schooners loaded.....	960	1117	... Decrease.....	157
do light.....	43	46	... do.....	3
	===	===		===

The number of vessels wintering in this harbour is 83, viz., 25 Schooners, 26 steamers, including tugs and ferries, 3 propellers and 29 steam and sailing yachts, the aggregate tonnage of which will amount to about 9,476 tons. There are also 7 dredges and 25 scows.

As will be seen from the accompanying statements, the cash receipts for the year are \$12,763.17. The ordinary expenditure for the same period, including cash on hand, amounts to \$11,436.17, showing a credit balance for the year of \$1,327.00. New work at the Western channel has been commenced, involving an outlay to date of \$3,359, which increases our over-draft at the bank to the amount of \$7,378.04.

The quantity of coal received by vessel is 160,132 tons, all anthracite, which is a decrease in the amount received of 6,174 tons, as compared with last year.

The amount of coal brought by rail, as per information received from the Custom house, is: bituminous, 180,521½ tons; anthracite, 120,639 tons. The total amount of coal received by rail and vessel is 461,282½ tons, or 4,968 tons more than last year.

Dredging to the amount of 30,400 cubic yards was done at the Western channel, as per contract with John Conlon. After the final certificate was paid it was found that a bar had formed in the channel, on which there was only 10 feet of water, which the Commissioners decided to have removed, and an agreement was entered into with Mr. Conlon for its removal at 10c. per yard, and 13,400 cubic yards taken out, at a cost of \$1,340. Mr. Conlon, however, has repudiated the agreement, and the money has been paid into court.

In my report for last year I called attention to the necessity for putting crib work round the northern end of the bar in the Western channel, to prevent the constant encroachment of the sand. This idea was adopted by the Board, and plans and specifications for the same were prepared by the engineer, Mr. Tully, and tenders were advertised for. Medler & Arnot's tender for \$38,000 being the lowest, and otherwise satisfactory, the contract was awarded them, and the work was commenced on the 3rd November. On the 15th of the month the first crib was placed in position, and the contractors are now busy framing cribs, which will be sunk as soon as practicable in the spring.

Application has been made to the Dominion Government for assistance in this work at the Western channel, and, in the event of such application being successful,

debentures for the balance will be issued by the Commissioners as required. Debentures are already signed and deposited in the Bank of Toronto at present as collateral against the overdraft.

The water was high this year, the average being $+ 23 \frac{1}{4}$ inches, or $12 \frac{1}{4}$ inches above the average of last year. The water reached its highest point $+ 37$ on the 21st June; the lowest was $+ 8$ on the 8th January, after which it rapidly rose. The water on the last day of the year was $+ 15 \frac{1}{2}$.

The range lights on the Queen's Wharf and Island Lighthouse were lighted on the 26th March, one day later than last year, and discontinued on the 13th December, the same date as last year.

The buoys were placed in the Western channel on the 31st March, in the Don channel on the 11th April, round the "Point" on the 15th, and in the Eastern Gap on the 16th April.

I am happy to say the Fog Horn service has been satisfactory and that there have been no complaints this year.

Arrangements were made last year with the Board of Trade for the lease of a couple of rooms in their new building at the corner of Front and Yonge streets, and the Harbour Office will be removed there in about a fortnight; the office has been on Bay street for the past 16 years. The new offices will be more central, nearer the water and better adapted for our business.

The following Government work at the Island has been done under the supervision of E. B. Temple, Esq., the engineer in charge.

"During the past year the breastwork has been further protected by 3,286 cubic yards of large stone, making, up to the present time, 4,350 lineal feet completed and 1,400 feet partially completed.

"The contractors for the works in the Eastern Gap have sunk in position 4 cribs, and they have 19 others in course of construction.

"A channel was kept open in the Gap during the season of navigation and was used by vessels."

I have to report the receipt from the Dominion Government of the patent for the lot at the Queen's Wharf filled in by the Commissioners; This lot is now leased to the Canadian Pacific Railway Company for a term of twenty-one years, renewable.

As the people at the last elections have voted in favour of the reclamation of the marsh lands by a syndicate, and as that part known as Ashbridge's Bay is legally part of Toronto harbour, and therefore under the jurisdiction of the Harbour Commissioners, before any plan is adopted in regard to it the concurrence of the Commissioner should first be obtained.

I have much pleasure in testifying to the zeal and ability with which my deputies, Mr. C. W. Postlethwaite and Capt. Taylor, have discharged their respective duties.

All which is respectfully submitted.

MORGAN BALDWIN,
Harbour Master.

9th January, 1891.

TORONTO HARBOUR WORKS.

TORONTO, 10th January, 1891.

SIR,—I have the honour to report that, in accordance with the resolution of the Trust, tenders were received, after due advertisement, for dredging on the bar south of the Queen's Wharf, and the tender of John Conlon, being the lowest, was accepted.

The dredging was commenced on the 13th of May and completed on the 30th of August last, 44,000 cubic yards of sand having been removed from the northern edge of the bar and channel. The dredge was also employed 20 days in scraping and removing boulders along the edge of the bar.

The width of the channel at the narrowest part south of the elevator was 350 feet, and the level of the water ranged from 36 inches to 22 inches above zero, when the dredging was completed.

There has been no dredging at any of the slips in the harbour.

Owing to the gradual annual increase of dredging on the bar the Trust decided to construct a breakwater along the northern edge of the bar, south of the Queen's Wharf, to arrest the encroachment on the channel. The breakwater will be 1,500 feet in length and 20 feet in width and height, loaded with stone, and planked. Advertisements for tenders were inserted on the 5th of August last, the lowest being that of Messrs. Medler & Arnot, which was accepted, and contract signed. The work has been progressing since that time, one crib having been sunk at the eastern end in 16 feet of water. Four cribs are now framed ready for sinking, and a large quantity of timber is now on hand. The framing of the cribs will be continued during the winter, and the breakwater will be completed on the 1st of November next.

I remain,

Your obedient servant,

A. B. LEE, Esq.,

Chairman Toronto Harbour Commissioners.

KIVAS TULLY,

Engineer.

APPENDIX No. 21.

REPORT OF THE HARBOUR COMMISSIONERS OF BELLEVILLE, FOR THE CALENDER YEAR ENDED 31st DECEMBER, 1890.

HARBOUR MASTER'S OFFICE,
BELLEVILLE, 6th January 1891.

The Honourable
The Minister of Marine and Fisheries,
Ottawa.

SIR,—The Harbour commissioners of the city of Belleville beg to submit herewith, for your approval, a statement of the receipts and expenditure in connection with the harbour during the year ending 31st December, 1890.

In explanation of some of the items of the expenditure, they beg to say that at a meeting of the Board in April last, a resolution was passed authorizing the Chairman (at that time Thos. Wills, Esq.), to employ Mr. Henry Carre, C.E., to make out plans and estimates of the probable cost of protecting Mill Island from washing away into the harbour. Plans, &c., were prepared. Tenders were invited for the proposed work of cribbing and rip-rap. The tenders were opened by the Board (as at present constituted), and were considered to call for a much larger expenditure (over \$13,000) than necessary for the purpose, and the work was not gone on with. The expenditure under heading "Mill Island Improvement" (A) was in connection with this work.

In October last, another plan was proposed—to utilize the material taken up by the dredges in connection with the island improvement. This plan was submitted to you and has received your approval. Owing to the lateness of the season, however, only a part of the work was completed last fall. About 400 feet of the roadway was made at a comparatively small expense, as shown by the items of expenditure under heading "Mill Island Improvement" (B). It is expected to complete this work (so far as shown on plan submitted for your approval in October last) early in the spring. The Commissioners hope to be able to submit further plans for the balance of the Mill Island work at an early period.

I have the honour to be, Sir,
Your obedient servant,
GEO. WALLBRIDGE,
Chairman Harbour Commissioners of Belleville.

DOMINION OF CANADA, } PROVINCE OF ONTARIO, } County of Hastings. } To Wit:	}	I, George Wallbridge, of the city of Belleville, in the County of Hastings, Esquire, make oath and say :— 1. I am one of the Harbour Commissioners of the city of Belleville and the Chairman of the Board.
---	---	--

2. I have personal knowledge of the matters set forth in the report and account herewith annexed.

3. The said report and statement of account are true and correct, and show the doings in office and the moneys received and expended by the said Harbour Commissioners during the past year.

SWORN before me at the city of Belleville, in }
 the County of Hastings, this 8th day of }
 January, A.D. 1891.

GEO. WALLBRIDGE,

W. B. NORTHROP,
A Commissioner in B.R. & C.H.

STATEMENT of the Receipts and Expenditure of the Harbour Commissioners of
Belleville for the Year ending December 31st, 1890.

DR.		CR.	
Receipts.	\$ cts.	Expenditure.	\$ cts.
To Balance on hand, 1st Jan., 1890....	887 36	Salary of Harbour Master to 31st Dec., 1890	308 30
Harbour Dues collected by Harbour Master, as per his statement.....	4,144 04	Booms—Paid the Rathbun Co. for swinging booms, as per their agreement with the city.....	113 75
		Piers—Removing two piers to prevent obstruction in mouth of river by ice.....	28 00
		Dredging—In channel leading to dock on western side of harbour, paid the Weddell Dredging Co. for two days' work.....	204 00
		Tallying Logs passing through booms.....	126 00
		Sundries—Tally books, stationery, fuel for harbour master's office.....	20 08
		Mill Island Improvement, A —Henry Carre, civil engineer account	\$124 75
		Labour and utensils account	68 24
		Int. P. & P. Co. for advertising tenders and forms for tenders.....	38 25
		T. S. Carman, advertising of tenders.....	23 40
		The Walker Co., utensils, &c.....	7 00
		John Lewis, utensils, &c....	4 00
			265 72
		Mill Island Improvement, B —Material placed upon island.....	\$161 52
		Labour account do ..	74 26
			235 78
		Balance on hand, deposited in cash, Bank of Commerce.....	3,729 77
	5,031 40		5,031 40

The Honourable

The Minister of Marine and Fisheries.

The Harbour Master of the port of Belleville would respectfully submit the following reports :—

Navigation opened on the 3rd day of April and closed on the 3rd day of December, 1890.

The following are the various goods and merchandise on which harbour revenue has been derived from during last season :—

IMPORTS.

Coal.....	\$1,470 60	
Sundries.....	144 65	
Steamers.....	101 50	
Schooners and barges.....	87 75	
	<u> </u>	\$1,804 50

EXPORTS.

Sawlogs, &c., taken down the Moira River.	\$1,983 51	
Grain of all kinds.....	334 83	
Sundries.....	21 20	
	<u> </u>	\$2,339 54
		<u> </u>
		<u> </u>
		<u> </u>
		\$4,144 04

All of which I have paid over to the Harbour Commissioners.

DOMINION OF CANADA,) I, Alexander Waters, of the city of Belleville, in
 PROVINCE OF ONTARIO,) the County of Hastings, Harbor Master, make oath and
 County of Hastings.) say : The above statement is true and correct, and shows
 To Wit. :) the business of my office and of all moneys received by
 me and the expenditure thereof by me during the past year.

Sworn before me at the city of Belleville, in)
 the county of Hasting, this 8th day of)
 January, A. D. 1891. .

ALEX. WATERS.

W. B. NORTHROP,

A Commissioner in B.R. & C.H.

The channel from the Bay of Quinté leading into the east side of the Belleville harbor would be very much improved by being widened. Now, since the Murray canal is open, a larger class of vessels may be expected in this direction.

And also the channel on the west side of the harbour, leading to the docks, near the saw mill of Messrs. Flint and Holton, would be much improved by deepening. Until lately only a small class of vessels frequented those docks, but now a coal yard has been established there, and a larger class of vessels is required for the business.

I have the honour to be, Sir,

Your obedient servant.

ALEX. WATERS.

Harbour Commissioner.

APPENDIX No. 22.

REPORT OF THE HARBOUR COMMISSIONERS OF MONTREAL.

HARBOUR COMMISSIONERS OF MONTREAL.

SECRETARY'S OFFICE,

MONTREAL, 17th February, 1891.

SIR,—I have the honour, by direction of the Harbour Commissioners of Montreal, to forward herewith, for the information of the Honourable the Minister of Marine and Fisheries, statement of the general receipts and disbursements of the Trust for the year ended 31st December, 1890.

The revenue from wharfage dues and rentals shows an increase over that of 1889 of about 9,600, or $3\frac{4}{5}$ per cent.

The usual reports for the past year of the Montreal Decayed Pilots' Fund, the Montreal Pilotage District, the Harbour Master, and the Chief Engineer on the works for the improvement and maintenance of the harbour, have already been forwarded you.

From the Harbour Master's report it will be seen that there was a large increase in the tonnage of ocean vessels over former years; while by that of the Chief Engineer it appears that the new wharves at Hochelaga and Maisonneuve made considerable progress, and that the ordinary repairs to the wharves and roadways were more extensive than usual.

The Commissioners, as in the two previous years, again published tide-tables for Cap à la Roche, which were much prized by the pilots and officers of vessels coming to the port.

I have the honour to be, Sir,

Your obedient servant,

ALEXANDER ROBERTSON,

Secretary.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

HARBOUR COMMISSIONERS
STATEMENT of General Receipts and Disburse
RECEIPTS.

	Revenue.	Capital.
	\$ cts.	\$ cts.
<i>Balance at 31st December, 1889:—</i>		
Deposits in Bank of Montreal and cash on hand.....	\$ 63,392 35	
Deposit with Louis Paré, on account Boom Dues and Canal Tolls.....	34 18	
do W. L. Scott, on account Buoy Service.....	20 23	
Sundry amounts due for wharfiges, &c.....	\$17,997 15	
LESS—Coupons not presented as yet.....	667 50	
	17,329 65	
Value of Montreal stone, coal, timber, lumber and treenails in store.....	17,394 53	
	\$98,170 94	
Securities and deposits in Montreal City and District Savings Bank, held in trust for Montreal Decayed Pilot Fund.....	46,812 24	
		144,983 18
<i>From Collector H. M. Customs, Montreal:—</i>		
Wharfage dues on imports.....	\$145,137 19	
do do exports.....	85,343 43	
	230,480 62	
<i>From Wharfinger for Local Traffic:—</i>		
Wharfage dues on goods inwards.....	9,898 59	
do do outwards.....	2,280 35	
Commutation of Richelieu and Ontario Navigation Co's wharfage dues.....	10,000 00	
Rental of Jacques Cartier Basin for small boats.....	50 00	
Rentals of spaces for piling lumber.....	2,105 35	
do do coal.....	1,186 70	
do do small offices.....	949 80	
do do scales.....	900 00	
do do piling firewood.....	618 60	
do do scrap iron.....	90 00	
do do phosphate.....	70 08	
	28,149 47	
From Canadian Pacific Railway Company, rental of wharf tracks.....	2,234 50	
Grand Trunk do do.....	812 50	
Dept. of Railways and Canals, rental of its offices in harbour building.....	1,200 00	
do Marine, rental of steamboat inspector's office.....	62 50	
John Lee & Co. do part of harbour yard.....	250 00	
Sincennes-McNaughton Line, for buoy tools and appliances.....	498 70	
An anonymous sender, in registered letter from St. Henri de Montreal.....	20 00	
City of Montreal, D. Shaw, Richelieu and Ontario Navigation Co., P. D. Dods & Co., account harbour repairs.....	472 87	
City of Montreal, rebate and refund of taxes, account harbour expenses..	102 95	
Craig & Sons, rental of water power, care of dynamos, &c., for 1890, (received in all \$611. 43, less due as per deductions in <i>contra</i> balance, \$260. 58) account electric light.....	350 85	
Cyrille Bellisle, pilot, fine for grounding S.S. "Catalan," account pilot exp.....	40 00	
Craig & Sons, interest on purchase price of electric light plant as per contract, account harbour interest.....	214 21	
Sundry purchasers, premium and accrued interest on bonds.....	1,314 07	
Grand Trunk Ry. Co., half expense of arbitration in <i>re</i> harbour railway.....		12 50
Sincennes-McNaughton Line, for transit sold it, account harbour plant.....		200 00
Calvin Co., for damage to dredge, and by sundries, account harbour dredging.....		57 70
Hochelaga Cotton Mfg. Co., labour on culvert, account new construction.....		266 73
Craig Sons, one-fifth purchase price of electric light plant.....		1,598 45
Sundry purchasers, for 4 per cent. harbour debentures sold.....		140,000 00
For Montreal Decayed Pilots' Fund, Trinity Dues, or 5 per cent. on pilots' earnings.....	\$ 2,799 15	
For Montreal Decayed Pilots' Fund, interest on investments and on cash in bank.....	2,567 58	
		5,366 73
Total Receipts on Capital Account.....		292,485 29
do do Revenue do.....		266,253 24
Total Receipts.....		558,738 53

OF MONTREAL.

ments for the Year ended 31st December, 1890.

DISBURSEMENTS.

	Revenue.	Capital.
	\$ cts.	\$ cts.
Harbour revenue, Mrs. John Young, annuity.....	600 00	
do account written off.....	18 00	
do refunds of wharfrage dues on sugar, &c., short landed.....	534 73	
Harbour repairs, maintenance of wharves and roadways (see <i>contra</i> for credit).....	56,852 77	
do survey, soundings and sundry surveys.....	978 20	
do interest on debentures and Government demand loan (see <i>contra</i> for credit).....	\$113,670 48	
do interest, Bank of Montreal for paying coupons.....	263 40	
	113,933 88	
do expenses, taxes, lighting, heating, &c., &c., (see <i>contra</i> for credit).....	10,367 56	
do salaries of administrative staff.....	10,980 04	
Electric lighting, rental of water power, &c., &c., for 1889, in part.....	327 43	
do cost of, under contract for 1890 (see <i>contra</i> for credit).....	4,628 20	
Travelling and incidental expenses.....	139 00	
Printing, stationery, postage stamps, &c.....	1,450 91	
Legal and notarial expenses.....	1,017 95	
Pilotage expenses, salary of Quebec agent, &c., (see <i>contra</i> for credit).....	780 70	
Buoys and beacons, sundry expenses for storing buoys during winter of 1889-90 (see <i>contra</i> for credit).....	422 28	
Harbour railway, award of arbitrators, &c., for wharf tracks (see <i>contra</i> for credit).....		13,760 00
do plant, bolt cutter, Wells' lights and instruments (see <i>contra</i> for credit).....		848 94
New spoon dredge hull, fitting up machinery, &c.....		19,800 28
New floating shop hull and fitting up.....		1,486 94
Harbour dredging in connection with new wharves at Hochelaga and Maisonneuve (see <i>contra</i> for credit).....		50,599 22
New Hochelaga and Maisonneuve wharves, cribwork, back filling and macadamizing (see <i>contra</i> for credit).....		68,029 02
Ship channel through harbour, removal of boulder shoals in current St. Mary.....		7,737 34
Harbour dredging, enlargement of Windmill Point basin.....		395 56
Montreal Decayed Pilots' Fund, pensions to old pilots and widows of pilots.....	\$ 4,055 49	
Montreal Decayed Pilots' Fund, audit of fund for 1889, postage, &c.....	52 16	
		4,107 65
Total Disbursements on Capital Account.....		161,764 56
<i>Balance at 31st December, 1890:—</i>		
Special deposit in Bank of Montreal at interest.....	\$100,000 00	
Deposit in Bank of Montreal at credit of coupon account.....	125 00	
do do do current do.....	23,427 27	
Cash on hand.....	2,333 56	
Amount due by Canadian Pacific Railway for rental of wharf track, &c.....	\$ 2,304 58	
Amount due by Richelieu and Ont. Navigation Co.....	59 55	
LESS—Due Messrs. Craig & Sons.....	\$ 110 08	
Coupons outstanding.....	732 50	
Due Dept. of Rys. and Canals.....	150 50	
	1,003 08	
	1,361 05	
Value of macadamizing stone in store.....	\$ 2,609 29	
do coal in store.....	1,199 68	
do timber in store.....	13,359 20	
do lumbr do.....	890 95	
do treenails do.....	565 00	
	18,624 12	
Outer column shows Total Disbursements on Revenue Account.....	145,871 00	203,031 65
<i>Montreal Decayed Pilot Fund (in trust for):—</i>		
Montreal harbour debentures.....	\$ 42,000 00	364,796 21
City of Montreal consolidated fund.....	5,000 00	
Deposit in Montreal City and District Savings Bank at interest.....	1,071 32	
	48,071 32	193,942 32
Total Disbursements.....		558,738 53

Verified,—RIDDELL & CARMAN, Auditors.

ALEX. ROBERTSON, Secretary.

HARBOUR COMMISSIONERS OF MONTREAL,
SECRETARY'S OFFICE,

MONTREAL, 21st January, 1891.

SIR,—By direction of the Harbour Commissioners, and in compliance with your letter of the 30th December, I now beg to transmit you a copy of the Harbour Master's annual report, with seven comparative statements, for the year 1890.

I have the honour to be, Sir,

Your obedient servant,

ALEXANDER ROBERTSON,

Secretary.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

REPORT OF THE HARBOUR MASTER OF THE PORT OF MONTREAL, FOR
THE YEAR 1890.

(Captain THOMAS HOWARD, Harbour Master).

HARBOUR COMMISSIONERS OF MONTREAL.

HARBOUR MASTER'S OFFICE,

MONTREAL, 5th January, 1891.

ALEXANDER ROBERTSON, Esq.,
Secretary, Harbour Commissioners of Montreal.

SIR,—For the information of the Board of Harbour Commissioners, I beg to submit the following as my annual report for the year 1890, with comparative statements showing the number, tonnage, classification, nationality, greatest number of vessels in port at one time, number and tonnage of sea-going vessels consigned to the different agents, with statements showing the number and tonnage of inland vessels and the greatest number in port at one time during the past ten years.

Seven hundred and forty-six (746) sea-going vessels arrived in port during the season, of the aggregate tonnage of 930,332 tons. Of this tonnage 69,816 passed into the canal, showing an increase of 51 vessels and 107,167 tons in tonnage, as compared with the year 1889. Of these vessels, 546 were built of iron, of an aggregate tonnage of 891,057 tons, and 200 of wood, of an aggregate tonnage of 39,275 tons. Of inland vessels there arrived in port 5,162, of an aggregate tonnage of 966,959 tons, showing a decrease of 685 vessels, and in tonnage 102,741 tons, and a total of 5,908 vessels of all classes, and 1,897,291 tons in tonnage, showing an increase of tonnage of vessels of all classes of 5,585 tons.

Some of the principal items of exports and imports during the season were :—

EXPORTS.

Lumber.—There were shipped to the United Kingdom 175,444,161 feet; to South America, 3,862,699 feet: total shipments, 179,306,860 feet, showing an increase of 42,539,596 feet over the previous year. Of this number, 161,147,836 feet were shipped from the harbour, and 18,159,024 feet from the canal. There is a decrease of 19,157,964 feet in quantity shipped to South America, which is due to political troubles in that Country.

Phosphate.—There were shipped 23,488 tons, showing an increase of 1,664 tons as compared with 1889.

Grain.—There were shipped 2,171,817 bushels of wheat, 4,805,035 of corn, 1,382,224 of pease, 210,000 of oats, 240,863 of rye, making a total of 8,809,039 bushels, and a decrease of 1,033,236 bushels from the previous year.

Flour.—There were shipped in bags and barrels equal to 447,031 barrels, showing a decrease of 72,544 barrels.

Cheese.—There were shipped 1,369,368 boxes, showing an increase of 224,972 boxes.

Apples.—There were shipped 160,594 barrels, showing an increase of 22,574 barrels over the previous year.

Cattle and Sheep.—Cattle shipped, 119,578 head, and 43,135 sheep, showing an increase of 34,525 head of cattle and a decrease of 15,848 sheep.

IMPORTS.

Coal.—We had from Great Britain 16,879 tons, showing a decrease of 15,402 tons; from the United States 181,611 tons, showing a decrease of 15,302 tons—making a total of 198,490 tons; from the Maritime Provinces 455,450 tons, showing an increase over the previous year of 72,626 tons. Of this coal, 552,100 tons were discharged in the harbour and 100,207 tons in the canal.

Cement.—We had 110,811 barrels, showing a decrease of 5,101 barrels from the previous year.

Scrap Iron.—We had discharged in the harbour 28,000 tons, showing an increase of 5,000 tons over the previous year.

WHARF ACCOMMODATION.

During the season the wharves were kept in good repair. The extension of the wharves at Hochelaga were well pushed forward, considering the detention by high water in the spring. On 29th September the barque "Karnack" with a cargo of sugar for the St. Lawrence sugar refinery, was berthed at the new pier opposite their refinery at Hochelaga. This was the first sea-going vessel discharged there, and was followed by a number of steam and sailing ships for the same company.

The increased accommodation at Hochelaga will be of great advantage to merchants and agents having vessels to discharge and load there.

I would recommend that the tracks of the Grand Trunk Railway and Canadian Pacific Railway be extended as soon as possible, so as to remove freight to and from vessels that cannot get berths in the west end of the harbour.

Yours respectfully,

THOMAS HOWARD,

Harbour Master.

Certified.

ALEXANDER ROBERTSON, *Secretary.*

WEATHER REPORT.

January.

1st, 8 a.m.—Mild; temp. 32.; 3 p.m., south-west wind; 9 p.m., rain; temp. 40.

2nd.—Temp. 46; rain this morning; snow all gone; bad roads.

3rd.—Fine clear morning; north-west wind; temp. 24 above; river clear of ice.

4th.—West wind; temp. 14 above.

5th, 8 a.m.—Snow storm; tem. 17 above; west wind.

6th.—North-east wind; temp. 20 above; 1 p.m., rain and snow.

7th.—Fine morning; temp. 12 above; west wind; sleighing good.

8th.—Temp. 18 above; east wind; nasty morning.

9th.—Fine and cold; north-west wind; temp. 6 below.

10th.—North-east wind; temp. 20 below; river blocked with ice.

11th.—East wind; tem. 10 below; water rising fast.

12th.—Temp. 9 above; 10 p.m., rain and east wind.

13th, 8 a.m.—Temp. 42 above; rain storm. At 2 p.m. blowing a gale.

14th.—Fine morning; west wind; temp. 10 above.

15th.—North-east wind; temp. 28 above; snowing.

16th.—East wind; snowing; temp. 25 above.

- 17th.—North wind; temp. 8 below; fine morning; good sleighing.
 18th.—Fine morning; north wind; temp. 2 above.
 19th.—East wind; temp. 24 above.
 20th.—East wind; temp. 24 above.
 21st.—West wind; temp. 12 above; fine weather; ice looks stationery.
 22nd.—West wind; temp. 7 above; channel open this morning.
 23rd.—Fine morning; east wind; temp. 4 above.
 24th.—Fine morning; west wind; temp. 5 above; crossing from Longueuil with teams to Hudon's cotton factory.
 25th.—South-west wind; temp. 20 above; crossing on foot opposite the city; river open from Nun's Island to Lachine Rapids.
 26th.—West wind; temp. 28 above; water high; 2 p.m. 38 feet, 9 inches.
 27th.—East wind; temp. 15 above; channel open opposite St. Helen's Island.
 28th.—West wind; temp. 2 below; making road to St. Lamberts.
 29th.—Temp. 30 above; south-west wind; fine weather.
 30th.—East wind; temp. 10 above; dark day.
 31st.—Very mild; south wind; temp. 32 above.

February.

- 1st.—Fine morning; west wind; temp. 20 above.
 2nd.—Temp. 2 above; north-east wind.
 3rd.—Rain this morning; south-west wind; temp. 35 above.
 4th.—Fine morning; temp. 10 above; west wind; crossing from St. Lamberts on lower road.
 5th.—Rain last night; temp., 7 a.m., 45 above; west wind and ice bad.
 6th.—Fine morning; north wind; temp. 4 above.
 7th.—Temp. 6 above; west wind; good crossing on lower road to St. Lamberts.
 8th.—Snow storm all last night and this morning; east wind; temp. 28 above.
 9th.—Temp. 10 above; west wind.
 10th.—North-east wind; temp. 4 above.
 11th.—Fine morning; north-east wind; temp. 10 below during the night.
 12th.—Snow storm; north-west wind.
 13th.—Mild; temp. 30 above; west wind.
 14th.—Very mild; temp. 36 above; north-west wind; snow and rain all afternoon.
 15th.—Fine morning; west wind; temp. 29 above.
 16th.—West wind; temp. 2 above.
 17th.—Fine; east wind; temp. 4 below; good sleighing.
 18th.—East wind, blowing fresh; temp. 10 above.
 19th.—Fine day; east wind; temp. 8 above.
 20th.—Temp. 17 above; east wind.
 21st.—North-west wind; temp. 5 above; sleighing good.
 22nd.—Fine weather; north-west wind; temp. 3 above.
 23rd.—Temp. 4 above; fine day.
 24th.—Mild south-west wind; temp. 35 above.
 25th.—Dark morning; west wind; temp. 37 above.
 26th.—Temp. 40 above; east wind; 7 p.m., rain.
 27th.—Mild day; temp. 35; west wind.
 28th.—Dreadful day; rain and wind; temp. 38; south-west wind.

March.

- 1st.—Delightful day; west wind; temp. 25 above.
 2nd.—Fine weather; west wind; temp. 30 above.
 3rd.—Fine and sunshine; temp. 15 above.
 4th.—West wind; temp. 14 above; fine sunshine.
 5th.—Fine day; temp. 10 above; west wind.

- 6th.—Temp. zero; west wind.
 7th.—Temp. 2 above; north-west wind.
 8th.—Temp. 17 above; west wind.
 9th.—Fine weather; 18 above; west wind.
 10th.—Temp. 20 above; west wind.
 11th.—South wind; temp. 37 above.
 12th.—Dark morning; temp. 45 above; south-west wind; rain all night and this morning.
 13th.—Dark day; rain; temp. 41.
 14th.—Temp. 40; south wind; crossing on all roads to city stopped.
 15th.—North-west wind; temp. 33.
 16th.—Cold west wind; temp. 30.
 17th.—Temp. 15 above; north-west wind.
 18th.—North wind; temp. 29 above.
 19th.—Temp. 20 above; south-west wind.
 20th.—Fine, but cold; temp. 25 above.
 21st.—Snow and rain; temp. 38; south wind.
 22nd.—North-west wind; temp. 38; fine morning
 23rd.—North-west wind; temp. 30.
 24th.—Temp. 22; north-west wind.
 25th.—Fine day; temp. 30; south-east wind.
 26th.—Temp. 40; north-west wind.
 27th.—West wind; temp. 35.
 28th.—Temp. 27; snow storm all afternoon and night.
 29th.—Snow storm continues; blowing a gale; temp. 25.
 30th.—Fine day; west wind; temp. 27.
 31st.—Temp. 27; north-west wind.

April.

- 1st.—Temp. 30; fine day.
 2nd.—Temp. 28; west wind; fine weather.
 3rd.—Fine morning; west wind; temp. 28.
 4th.—North-west wind; rain; temp. 44.
 5th.—Cold morning; temp. 27; north-east wind.
 6th.—Temp. 37; east wind.
 7th.—Temp. 34; fine weather.
 8th.—North-east wind; temp. 36.
 9th.—Dark morning; south wind; temp. 40.
 10th.—Temp. 40; rain storm last night; river all clear of ice in harbour; channel open to Longue Pointe.
 11th.—Temp. 35; about 2½ feet water on wharves; very little ice.
 12th.—Fine morning; temp. 45; west wind.
 13th.—Temp. 50; west wind.
 14th.—Temp. 47; schooner "Eugenie" arrived at 10 a.m. from Boucherville—first arrival.
 15th.—Fine weather; temp 45; north wind; 6 p.m., steamers "Longueuil" and "Hochelaga" arrived from Boucherville, and two tugs from Sorel.
 16th.—Temp. 46; fine weather; buoys being placed in river to Sorel.
 17th.—Dark weather; north-east wind; temp. 42.
 18th.—Temp. 35; north-west wind.
 19th.—Fine weather; temp. 45; north wind.
 20th.—North wind; temp. 60.
 21st.—West wind; temp. 45.
 22nd.—East wind; temp. 50; fine morning; raft seen this morning; came from Garden Island.
 23rd.—West wind; Lachine Canal open for navigation; temp. 50.
 24th.—Temp. 40; north-east wind; ice reported passing Quebec.

25th.—East wind; temp. 40; steamer "Filgate" arrived this morning down Lachine Rapids; navigation open to Quebec.

26th.—East wind; temp. 40.

27th.—Snow last night; rain this morning; temp. 40; steamer "Miramichi" arrived from Quebec.

28th.—Fine weather; east wind; temp. 40.

29th.—Fine weather; south-west wind; temp. 45.

30th.—Temp. 45; south-west wind; steamship "Oregon" arrived at 9 a.m., being the first arrival from sea this spring.

May.

1st.—Temp. 48; north-west wind; fine morning.

2nd.—West wind; frost last night; 8 a.m., temp. 38.

3rd.—Temp. 50; west wind.

4th.—North-east wind; temp. 40; rain all day.

5th.—Rain all night and this morning; north-east wind.

6th.—Rain continues; west wind; temp. 50.

7th.—West wind; temp. 50; fine morning.

8th.—North-west wind; temp. 51; fine weather.

9th.—Temp. 48; dark day; south wind.

10th.—Fine morning; rain all last night; east wind; temp. 50

11th.—Fine day; temp. 60; west wind.

12th.—East wind; temp. 60.

13th.—Fine morning; east wind; temp. 50.

14th.—Dark morning; west wind; temp. 60.

15th.—South wind; temp. 60; fine day.

16th.—Temp. 50; west wind; fine morning.

17th.—South wind; temp. 55.

18th.—Temp. 60; east wind.

19th.—South-west wind; rain this morning.

20th.—Rain all night and this morning; temp. 54.

21st.—Fine and sunshine; temp. 50; west wind.

22nd.—Temp. 60; west wind.

23rd.—South-west wind; temp. 60; fine day.

24th.—East wind; temp. 60.

25th.—South wind; blowing a gale; temp. 64.

26th.—Temp. 60; south-west wind.

27th.—Rain last night; dark morning; north-west wind; temp. 60.

28th.—Temp. 55; rain last night; north-east wind.

29th.—Fine morning; east wind; temp. 60.

30th.—Temp. 60; east wind; fine day.

31st.—Fine morning; east wind; temp. 60.

June.

1st.—Temp. 75; west wind; fine day.

2nd.—North-west wind; temp., 8 a.m., 55.

3rd.—Temp. 60; north-west wind.

4th.—Rain; east wind; temp. 55.

5th.—Dark morning; east wind; temp. 60; rain.

6th.—North-west wind; temp. 70; fine day.

7th.—Fine morning; west wind; temp. 65.

8th.—Fine, but cold; north-west wind; temp. 55.

9th.—Temp. 58; east wind.

10th.—South-west wind; temp. 60.

11th.—Temp. 70; west wind.

12th.—Rain this morning; temp. 60; south wind.

13th.—Rain last night and this morning; temp. 55.

- 14th.—Rain continues; south wind; temp. 60.
15th.—Fine day; south wind; temp. 70.
16th.—Dark morning; south wind; temp. 65.
17th.—Fine day; south wind; temp. 75.
18th.—Fine morning; west wind; temp. 75.
19th.—Fine; much colder; temp. 65; north-east wind.
20th.—Temp. 70; north-west wind.
21st.—Fine morning; temp. 70; west wind.
22nd.—North-west wind; temp. 70; fine day.
23rd.—South-west wind; temp. 75
24th.—Temp. 80; west wind.
25th.—North-east wind; rain storm last night; temp. 75.
26th.—Fine morning; east wind; temp. 75.
27th.—Temp. 70; north-east wind.
28th.—Temp. 75; east wind; fine day.
29th.—Fine day; temp. 80.
30th.—Delightful day; temp. 80; west wind.

July.

- 1st.—Temp. 80; south-west wind; at 2 p.m., temp. 90.
2nd.—Temp. 78; fine weather; south-west wind.
3rd.—Rain this morning; temp. 75; south wind.
4th.—West wind; temp. 75.
5th.—North-west wind; temp. 73.
6th.—Temp. 70; west wind.
7th.—Rain this morning; temp. 70.
8th.—North-west wind; temp. 80.
9th.—North wind; temp. at 8 a.m., 60.
10th.—Cold last night; temp. 57.
11th.—Temp. 60.
12th.—West wind; temp. 70.
13th.—Temp. 82; west wind.
14th.—South wind; temp. 80.
15th.—Thunder storm this morning; temp. 75.
16th.—Very warm; temp. 85; west wind.
17th.—Temp. 75; south-west wind.
18th.—Temp. 65; north-west wind.
19th.—Rain this morning; temp. 65.
20th.—West wind; temp. 65.
21st.—Temp. 60; north-west wind.
22nd.—Temp. 63; south-west wind.
23rd.—West wind; temp. 70.
24th.—Temp. 65; south wind.
25th.—Temp. 70; south wind.
26th.—Rain this morning; temp. 75.
27th.—Temp. 75; west wind.
28th.—Temp. 80; south wind.
29th.—Temp. 80; south wind.
30th.—Temp. 75; west wind.
31st.—West wind; temp. 80.

August.

- 1st.—Fine weather; temp. 75; west wind.
2nd.—South-west wind; temp. 87.
3rd.—Rain storm; temp. 88; west wind.
4th.—South-west wind; temp. 85.
5th.—Temp. 85; rain all day; south-west wind.

- 6th.—Fine; temp. 75; west wind.
7th.—North-west wind; temp. 75.
8th.—Temp. 75; west wind.
9th.—Temp. 80; south-west wind.
10th.—North-east wind; temp. 68.
11th.—Temp. 63; north-east wind.
12th.—Temp. 70; north-east wind.
13th.—Temp. 75; north-west wind.
14th.—Temp. 80; south wind.
15th.—Temp. 75; north-east wind.
16th.—Temp. 60; north-east wind.
17th.—Rain all day; temp. 70; west wind.
18th.—Temp. 58; north-east wind.
19th.—Temp. 65; 4 p.m., rain storm; north wind.
20th.—Temp. 60; north wind.
21st.—North-west wind; temp. 65; rain all afternoon.
22nd.—Temp. 60; west wind.
23rd.—Temp. 55; 9 a.m., rain storm; easterly wind.
24th.—Rain all day; temp. 53; east wind.
25th.—Temp. 53; north-west wind.
26th.—West wind; temp. 65.
27th.—Rain this morning; south-east wind; temp. 68.
28th.—Temp. 65; north-west wind.
29th.—Fine morning; north wind; temp. 65.
30th.—Rain this morning; south wind; temp. 65.
31st.—West wind; temp. 65; rain.

September.

- 1st.—Fine and clear; temp. 60; south-west wind.
2nd.—Dark morning; temp. 64; south-west wind.
3rd.—Fine morning; temp. 65; north-west wind.
4th.—Temp. 76; south-west wind.
5th.—Temp. 70; west wind.
6th.—Temp. 65; south-west wind.
7th.—Temp. 80; south-west wind.
8th.—South-west wind; temp. 75; rain storm.
9th.—East wind; temp. 60; 2 p.m., H.M.S. "Canada," Captain Dowding, with Admiral Watson on board, accompanied by H.M.S. "Thrush," Captain His Royal Highness Prince George of Wales, arrived in port, and were berthed at Victoria Pier.
10th.—East wind; temp. 60; overcast.
12th.—Rain last night; temp. 60.
13th.—South-west wind; H.M.S. "Canada" and "Thrush" left at 6 a.m. for Quebec; raining.
14th.—West wind; temp. 65.
15.—Temp. 58; west wind.
16th.—East wind; temp. 60.
17th.—Cold east wind; temp. 59.
18th.—Temp. 60; west wind.
19th.—Temp. 63; south-west wind.
20th.—Temp. 59; north-west wind.
21st.—Temp. 55; west wind.
22nd.—Temp. 55; north-west wind.
23rd.—North-west wind; temp. 54.
24th.—Temp. 53; north-west wind.
25th.—Temp. 45; north-west wind.
26th.—South-west wind; temp. 60.
27th.—North-east wind; temp. 4.

28th.—Temp. 50; north-east wind.

29th.—North-east wind; temp. 50.

30th.—West wind; temp. 55.

October.

1st.—Temp. 60; north-west wind.

2nd.—West wind; temp. 60.

3rd.—Rain this morning; temp. 60; south-west wind.

4th.—Temp. 60; south-west wind.

5th.—Temp 55; west wind.

6th.—Temp 47; north-east wind.

7th.—Cold east wind; temp 42.

8th.—West wind; rain last night; temp 55.

9th.—East wind; temp. 47.

10th.—South-west wind; temp. 47.

11th.—North-west wind; temp. 55.

12th.—Temp. 55; north wind.

13th.—North-east wind; frost last night.

14th.—Temp. 47; rain this morning.

15th.—West wind; temp. 47; fine day.

16th.—South-west wind; temp. 56.

17th.—Rain this morning; temp. 55; south wind.

18th.—East wind; temp. 55.

19th.—Easterly wind; temp. 50.

20th.—Temp. 47; east wind.

21st.—Frost last night; east wind.

22nd.—North-east wind; temp. 45; frost last night.

23rd.—Temp. 44; north-east wind.

24th.—East wind; temp. 44.

25th.—East wind; temp. 44.

26th.—Temp. 50; east wind.

27th.—East wind; temp. 50.

28th.—Temp. 44; west wind.

29th.—Temp. 38; east wind.

30th.—North-west wind; rain last night; temp. this morning 42.

31st.—Temp. 44; south-west wind.

November.

1st.—Temp. 38; west wind.

2nd.—Rain; temp. 42; west wind.

3rd.—North-west wind; temp. 38.

4th.—Fine frosty morning; temp. 28; west wind.

5th.—North-west wind; temp. 38.

5th.—East wind; temp. 44.

7th.—Temp. 39; east wind.

8th.—Temp. 55; north-west wind.

9th.—North-east wind; rain; temp. 50.

10th.—North-west wind; temp. 42.

11th.—East wind; temp. 26; fine morning.

12th.—Temp. 27; west wind.

13th.—South-west wind; temp. 40.

14th.—West wind; temp. 45.

15th.—Temp. 32; east wind.

16th.—West wind; temp. 38.

17th.—South-west wind; temp. 38.

18th.—Snow last night; temp. 38; west wind.

19th.—Rain this morning; west wind; temp. 45.

- 20th.—Fine and cold; west wind; temp. 28.
 21st.—Temp. 27; north-west wind.
 22nd.—Temp. 37; west wind.
 23rd.—Temp. 24; fine and clear.
 24th.—Temp. 24; SS. "Brazilian" left port this morning at 7 a.m., being the last sea-going vessel for sea this season.
 25th.—Rain; temp. 40; south-west wind.
 26th.—North-west wind; temp. 23.
 27th.—Temp. 15; north wind.
 28th.—North wind; temp. 16.
 29th.—Temp. 30; west wind.
 30th.—Mild; west wind; temp. 40; steamer "Lougueuil" gone to winter quarters.

December.

- 1st.—North-west wind; temp. 5.
 2nd.—North-west wind; temp., 7 a.m., 12 below zero.
 3rd.—East wind; temp. 5 below; ice making in harbour, 2 p.m., snow storm; steamer "Laprairie" gone to winter quarters; navigation closed.
 4th.—Snow storm all night and this morning; north-west wind; blowing a gale.
 5th.—East wind; temp. 15 above; sleighing good.
 6th.—Temp. 4 below zero; water rising.
 7th.—West wind; temp. 15 below.
 8th.—North-west wind; temp. 5 below.
 9th.—Temp. 9 above; west wind.
 10th.—Temp. 30 above; south-west wind; water level with docks.
 11th.—Temp. 25 above; west wind.
 12th.—North wind; temp. 12 above.
 13th.—Temp., 7 a.m., zero; north-west wind.
 14th.—Temp. 12 above; west wind.
 15th.—Temp. 28 above; west wind.
 16th.—Temp. 12 above; fine weather.
 17th.—Temp. 10 above; north-west wind.
 18th.—Temp. 20 above; north-west wind.
 19th.—Temp. 4 above; north-west wind; ice looks stationery and very level; hardly any shove.
 20th.—Fine morning; south-west wind; temp. 2 below; ice shoved at 10 a.m.
 21st.—Temp. 30 above; snow and rain; east wind.
 22nd.—Fine, clear morning; temp. 16 above; north-west wind; water 33 feet.
 23rd.—Temp. 28 above; shove in afternoon; water 34 feet.
 24th.—West wind; temp. 6 above; water 33 feet 3 inches.
 25th.—Temp. 6 below; west wind.
 26th.—East wind; 10 below zero; crossing on ice at Longueuil.
 27th.—Snow this morning; east wind; temp. 12 below zero.
 28th.—North-west wind; temp. 6 below.
 29th.—Temp. zero; north-west wind; road-making to St. Lamberts.
 30th.—North-west wind; temp. 12 below; sleighs crossing to St. Lamberts.
 31st.—North-west wind; temp. 14 below zero; good crossing to St. Lamberts and Longueuil.

The month throughout was very cold, not one day's thaw, and eleven days in the month the thermometer was from zero to 16 below zero.

Yours respectfully,

THOMAS HOWARD,
Harbour Master.

Certified

ALEXANDER ROBERTSON,
Secretary.

PORT OF MONTREAL.

STATEMENT showing the Nationality and Tonnage of Sea-going Vessels that arrived in Port during the season of 1890 that were navigated by 22,663 seamen.

Nationality.	Number of Vessels.	Tonnage.
British.....	697	878,481
Norwegian....	24	18,187
German.....	20	25,713
French.....	2	3,520
Spanish.....	2	2,426
American.....	1	2,005
Total	746	930,332

THOMAS HOWARD,
Harbour Master.

PORT OF MONTREAL.

COMPARATIVE Statement showing the dates of Opening and Closing of Navigation, the first Arrival from Sea, and the last Departure for Sea, the past Ten Years.

Years.	Opening of Navigation.	Closing of Navigation.	First Arrival from Sea.	Last Departure for Sea
1881.....	April 21.	Jan. 2.	April 29.	Nov. 23.
1882.....	do 11.	Dec. 9.	May 6.	do 21.
1883.....	do 27.	do 16.	do 5.	do 20.
1884.....	do 22.	do 18.	do 2.	do 20.
1885.....	May 5.	do 7.	do 8.	do 20.
1886.....	April 24.	do 4.	April 30.	do 25.
1887.....	May 1.	do 23.	May 3.	do 28.
1888.....	April 29.	do 14.	do 4.	do 22.
1889.....	do 14.	do 29.	April 27.	do 23.
1890.....	do 15.	do 3.	do 30.	do 24.

THOMAS HOWARD,
Harbour Master.

COMPARATIVE Statement showing the Number and Tonnage of Inland Vessels that arrived in Port the past Ten Years, with the greatest number in Port at one time.

Years.	Number of Vessels.	Tonnage.	Greatest number in Port at one time.	
1881.....	6,030	949,380	191	Nov. 4.
1882.....	5,947	848,780	190	Sept. 29.
1883.....	5,477	764,721	174	do 5.
1884.....	4,808	726,015	161	July 9.
1885.....	5,003	724,975	142	Oct. 1.
1886.....	5,521	800,819	178	Aug. 25.
1887.....	5,367	791,452	189	May 31.
1888.....	5,500	863,014	163	Aug. 14.
1889.....	5,847	1,069,709	187	do 15.
1890.....	5,162	966,959	167	Oct. 20.

THOMAS HOWARD,
Harbour Master.

PORT OF MONTREAL.

COMPARATIVE STATEMENT showing the Number, Tonnage and Classification of Sea-going Vessels that Arrived in Port from the Maritime Provinces the past Ten Years.

Years.	Steamships.	Tonnage.	Ships.	Tonnage.	Barques.	Tonnage.	Brigs.	Tonnage.	Brigantines.	Tonnage.	Schooners.	Tonnage.	Total Number of Vessels.	Total Tonnage.
1881...	104	80,040	1	734	44	10,666	2	553	13	2,502	48	4,883	212	99,378
1882....	168	136,036	.....	.....	25	15,574	.....	.....	13	2,364	54	5,993	260	159,967
1883....	191	164,982	.....	.....	11	8,064	1	307	6	1,015	54	5,620	263	179,990
1884....	161	124,377	.....	.....	8	5,031	.....	.....	1	456	40	3,825	210	133,989
1885....	142	117,436	.....	.....	18	11,997	.....	.....	10	2,307	47	4,814	217	133,554
1886....	175	150,784	.....	.....	4	2,535	3	794	2	466	41	2,902	225	157,481
1887....	224	194,023	2	2,389	11	8,676	1	313	2	342	36	3,139	276	208,882
1888....	213	195,598	1	1,199	4	3,079	.....	.....	3	701	45	3,375	256	203,952
1889....	184	173,076	.....	.....	1	998	.....	.....	3	441	52	4,668	240	179,183
1890....	252	235,722	.....	.....	.....	.....	.....	.....	1	170	42	3,714	295	239,606

THOMAS HOWARD,
Harbour Master.

PORT OF MONTREAL.

COMPARATIVE STATEMENT showing the Number, Tonnage and Classification of Sea-going Vessels that arrived in Port the past ten years, with the dates of the greatest number in Port at one time, each year.

Year.	Steamships.	Tonnage.	Ships.	Tonnage.	Barques.	Tonnage.	Brigs.	Tonnage.	Brigantines.	Tonnage.	Schooners.	Tonnage.	Total Number of Vessels.	Total Tonnage.	Greatest Number in Port at one time.
1881...	321	446,457	5	4,640	104	60,617	9	2,377	30	6,152	100	11,686	569	531,929	Aug. 14 59
1882...	379	475,679	4	4,330	93	51,195	10	2,702	37	7,182	125	13,604	648	554,692	do 21 53
1883...	464	605,805	3	3,356	70	38,547	7	2,417	15	3,012	101	11,126	660	664,263	June 27 38
1884...	444	585,397	2	2,218	83	49,048	3	1,036	13	2,996	81	8,679	626	649,374	Aug. 13 44
1885...	441	619,647	2	2,792	76	45,560	1	338	23	6,141	86	9,376	629	683,854	July 15 43
1886...	532	736,648	11	13,475	68	47,233	10	3,061	7	1,850	75	7,432	703	809,699	Aug. 18 44
1887...	600	807,471	7	8,684	68	43,275	2	1,118	7	2,031	82	8,194	767	870,773	July 21 37
1888...	532	742,276	7	9,634	32	20,218			10	2,631	74	7,714	655	782,473	June 27 36
1889...	522	763,783	8	11,923	49	33,983	4	1,239	11	2,356	101	9,882	695	823,165	Aug. 14 39
1890...	624	889,189	9	13,127	33	19,442	2	590	8	1,333	70	6,671	746	930,332	Sept. 2 37

THOMAS HOWARD, *Harbour Master.*

PORT OF MONTREAL.

NUMBER and Tonnage of Sea-going Vessels consigned to the following Merchants, during the Season of 1890.

No.	Names.	Steam	Tonnage.	Sail.	Tonnage.	Total No.	Total Tonnage.
1	H. & A. Allan.....	77	180,297			77	180,297
2	R. Reford & Co.	72	121,469			72	121,469
3	D. Torrance & Co.	47	107,425			47	107,425
4	Canada Shipping Co.	30	73,657			30	73,657
5	Kingman, Brown & Co.	64	64,052			64	64,052
6	McLean, Kennedy & Co.	38	38,846	3	3,089	41	61,935
7	Carbry, Routh & Co.	31	31,001	3	4,389	34	35,390
8	Munderloh & Co.	24	34,107			24	34,107
9	J. G. Sidey.....	28	31,959			28	31,959
10	J. & R. McLea.....	28	30,818	1	66	29	30,884
11	Henry Dobell & Co.	36	25,010			36	25,010
12	Intercolonial Coal Co.	26	24,148			26	24,148
13	H. Dobell (Canal).....	28	19,268			28	19,268
14	F. C. Henshaw.....	16	16,790			16	16,790
15	Carbry & Routh (Canal) ..	11	9,983	1	1,500	12	11,483
16	Anderson & McKenzie.....	2	2,782	14	8,498	16	11,280
17	J. G. Sidey (Canal).....	10	9,996			10	9,996
18	Thos. Fraser & Co.	20	7,860	11	828	31	8,688
19	D. Shaw.....	5	8,349			5	8,349
20	Kingman & Brown (Canal) ..	9	8,206			9	8,206
21	Burstall & Co.	5	6,845			5	6,845
22	Anderson & McKenzie (Canal)			9	3,867	9	3,867
23	Masters.....	2	2,092	10	1,683	12	3,775
24	W. E. Boyd.....			3	3,230	3	3,230
25	Imperial Government.....	2	3,175			2	3,175
	Eighteen others.....	13	11,054	67	13,993	80	25,047
		624	889,189	122	41,143	746	930,332

THOMAS HOWARD, *Harbour Master.*

STATEMENT showing the Number and Tonnage of Ocean Steamers and Sailing Vessels, also of Inland Vessels that arrived in Port of Montreal from 1850 to 1890.

Years.	Ocean-going Steamships.	Tonnage of Ocean-going Steamships.	Ocean-going Sailing Vessels.	Tonnage of Ocean-going Sailing Vessels.	Total Tonnage of Steamships and Sailing Vessels.	Total No. of Steam and Sail Vessels.	Inland Vessels.	Tonnage.	Grand Total.
1850.....			222	46,867	46,867	222			46,867
1851.....			275	58,605	58,605	175			58,605
1852.....			185	45,012	45,012	185			45,012
1853.....	4	1,951	248	57,752	59,703	252			59,703
1854.....	6	5,545	252	65,365	70,910	258	4,251	323,578	394,488
1855.....			197	48,154	48,154	197	3,281	312,001	360,155
1856.....	16	14,276	231	57,045	71,321	247	3,311	384,467	455,788
1857.....	9	7,541	218	60,199	67,740	227	3,725	429,532	497,272
1858.....	16	17,887	209	60,922	78,809	225	4,124	342,224	422,033
1859.....	35	43,704	195	50,956	94,660	230	4,198	459,065	553,725
1860.....	32	47,385	222	74,174	121,559	257	4,558	348,652	470,211
1861.....	40	51,298	534	210,495	261,793	574	5,247	530,224	792,017
1862.....	52	62,912	519	202,331	265,243	571	4,875	523,991	789,234
1863.....	54	56,460	450	152,762	209,222	504	4,697	534,740	743,962
1864.....	51	59,071	327	102,830	161,901	378	4,509	420,694	582,595
1865.....	63	78,015	295	74,928	152,943	358	4,771	626,550	779,493
1866.....	70	75,474	446	130,301	205,775	516	5,083	613,679	819,454
1867.....	106	87,199	358	111,854	199,053	464	5,248	743,477	943,530
1868.....	105	101,566	373	97,193	198,759	478	5,822	746,927	945,186
1869.....	117	117,965	440	141,898	259,863	554	5,866	721,324	981,187
1870.....	144	133,912	536	182,934	316,846	680	6,345	819,476	1,136,322
1871.....	142	146,927	522	204,794	351,721	664	6,878	824,787	1,176,508
1872.....	215	217,713	512	181,087	398,800	727	7,150	936,782	1,335,582
1873.....	242	245,237	460	167,241	412,478	702	6,751	933,462	1,345,934
1874.....	266	262,096	465	161,327	423,423	731	6,855	956,837	1,380,260
1875.....	256	255,435	386	130,677	386,112	642	6,178	811,410	1,195,525
1876.....	240	262,829	362	128,351	391,180	602	6,083	786,083	1,177,263
1877.....	247	240,219	266	136,640	376,859	513	6,338	847,978	1,224,837
1878.....	207	272,878	309	124,388	397,266	516	5,502	764,243	1,161,509
1879.....	289	367,463	323	139,506	506,969	612	5,698	817,243	1,324,212
1880.....	354	475,741	356	152,530	628,271	710	6,489	1,044,380	1,672,651
1881.....	321	446,457	248	85,472	541,929	569	6,030	949,380	1,481,309
1882.....	352	466,460	296	88,186	554,646	648	5,947	848,780	1,403,426
1883.....	464	605,805	196	58,458	664,263	660	5,477	764,721	1,428,984
1884.....	441	585,397	182	63,977	649,374	626	4,808	726,015	1,375,389
1885.....	441	619,647	188	64,207	683,854	629	5,003	724,975	1,408,829
1886.....	532	736,648	171	73,051	809,699	703	5,521	809,819	1,619,519
1887.....	600	807,471	167	63,302	870,773	767	5,367	791,452	1,662,225
1888.....	532	742,276	123	40,179	782,473	655	5,500	863,014	1,645,487
1889.....	522	763,783	173	59,382	823,165	695	5,847	1,069,709	1,892,874
1890.....	624	889,189	122	41,143	930,332	746	5,162	966,959	1,897,291

In the years 1850, 1851, 1852 and 1855 no ocean-going steamships arrived, 1853 being the first to witness such vessels, while for the years 1850 to 1853, inclusive, the figures for inland vessels cannot be given, owing to the records being destroyed by a fire.

THOMAS HOWARD,
Harbour Master.

REPORT ON THE WORKS FOR THE IMPROVEMENT AND MAINTENANCE
OF THE HARBOUR OF MONTREAL, FOR THE YEAR 1890.

(JOHN KENNEDY, M. INST. C.E., Chief Engineer.)

HARBOUR COMMISSIONERS OF MONTREAL,
CHIEF ENGINEER'S OFFICE,
MONTREAL, 7th February, 1891.

ALEXANDER ROBERTSON, Esq.,
Secretary, Harbour Commissioners of Montreal.

DEAR SIR,—I beg to submit, for the information of the Board of Harbour Commissioners, the following report upon the works in the harbour of Montreal for the year ended 31st December, 1890:

The following are the chief details of the work done :—

NEW WORKS.

Sections 5 and 6 (Windmill Point).—A little rock dredging was done in spring, for the immediate purpose of obtaining stone to repair wharves, but in such a way as also to contribute toward the enlargement of the basin. Expenditure, \$395.56.

Sections 39 and 40 (Hochelaga).—The full width of the wharf from Dezery street to 300 feet above was covered with new macadamizing stone.

Sections 41 and 42 (Hochelaga).—At the Hochelaga cotton mill, work was resumed on the new wharf on the 22nd of July, which was as soon as the water had sufficiently lowered, and the crib work was extended 209 lineal feet down stream, making, with last year's work, a length of 1,005 feet. An addition of 219 feet was made to the superstructure, making in all 670 feet of finished new wharf. The remaining 335 feet of crib work was built up to about 3 feet above ordinary low water, so as to allow of its being continued at an early date next summer. The crib work and the space in rear were filled with dredgings to the extent of 70,379 cubic yards, in order to form the wharf.

The foundation for the crib work put down in the past year, and for its further extension, was dredged out, as was also part of the main shoal in front of the new wharf. Quantity dredged, 24,345 cubic yards.

Section 44.—The timber culvert, 5 feet 6 inches high by 6 feet wide, inside, at the Ruisseau Mignon, was continued towards shore 45 feet, to be there connected with the sewer built by the city during the past summer.

Sections 45 and 46 (Maisonneuve).—At Maisonneuve six cribs, aggregating 722 feet in length, were added to the new pier, which, with those placed last year, make 1,265 feet of new crib work. On this the superstructure was raised to the full height for a length of 680 feet, viz., 100 feet along the shore wharf above the pier and 580 feet along the upper side of the pier itself. The remaining 585 feet of crib work was built up to about 3 feet above ordinary low water level, so that work may be resumed early next summer. The finished crib work and about 50 feet in breadth in rear were filled up to the full wharf height with dredgings, and covered with macadamizing stone. The unfinished portions of the crib work were also filled and back-filled with dredgings to the height of the timber work. Total quantity of filling, 50,439 cubic yards.

The basin above the new pier was dredged to a width of 200 feet, with a depth, in the greater part of it, of $27\frac{1}{2}$ feet, and in the remainder of 25 feet, at low water. Below the pier, also, considerable dredging was done, toward forming a basin for vessels. Quantity dredged, 162,213 cubic yards.

One berth of the new pier was ready for use on the 9th September, and on that day the first vessel, a coal barge, was berthed at it.

The aggregate expenditures on the new work at Sections 41 and 42, Hochelaga, and Sections 44 to 46, Maisonneuve, are :

For crib work	\$ 50,110 99
For back-filling and macadamizing	17,651 30
For dredging and derrick work.....	50,541 52
Total.....	\$ 118,303 81

New crossings of block stone paving were laid across the wharves in different places, as follows :—

One on Section 8, in line of Black's Bridge ; one on Section 13, at foot of ramp leading to Port street ; one at Brock street ramp ; one at Voltigeurs street ramp ; one at Monarque street ramp ; one at Delorimer Avenue ramp ; and one at Dezery street.

SHIP CHANNEL THROUGH HARBOUR.

The removal of the boulder shoals, which somewhat obstructed the channel in the Current St. Mary, was continued with a stone lifter borrowed from the Department of Public Works. Work was commenced on the 19th of June and continued till 20th September, when the stone lifter was required by the Department, and work was stopped. By this time all the more important shoals had been removed, and the depth of water on them tested. Expenditure, \$2,737.34.

HARBOUR REPAIRS.

The water in the harbour rose at the breaking up of the ice last spring to 35 feet 1 inch on the lower lock sill of the Lachine Canal, which is 3 inches above the average of many years past. The ice moved off without seriously damaging any of the wharves, and leaving no great quantity lodged upon them.

The total cost of maintenance and repairs for the year was \$56,380, which compares with the cost of previous years as follows :—

1875.....	\$16,499
1876.....	35,711
1877.....	26,077
1878.....	18,974
1879.....	18,819
1880.....	17,330
1881.....	16,159
1882.....	27,962
1883.....	35,768
1884.....	44,869
1885.....	42,158
1886.....	64,989
1887.....	64,984
1888.....	49,520
1889.....	51,892
1890.....	56,380

The following are the principal items of repair in 1890 :—

Section 6 (Windmill Point).—An ice breaker was put on the upper end of the crib work of the Windmill Point wharf, consisting of new stringers, ties and 4-inch planking.

Section 11 (Windmill Point).—The old planking and sleepers for a distance of 240 feet across the lower end of the wharf were taken up and the wharf repaired with new hemlock sleepers, top planking and face planking and new pine coping. Top planking reduced to 12 feet wide.

Sections 13 and 14 (Allan Line Berths).—About 700 feet of the middle railway track was taken up and moved farther from the north-east track, so as to admit freight waggons between the lines of cars on these two tracks. A part of the wharf, extending from the revetment wall to a distance beyond both tracks, had the roadway renewed by the removal of the old material and replacing it with 1 foot of shale rock foundation and a covering of 10 inches of new macadamizing stone.

The crib work across the basin at the lower side of Section 14 was repaired with four to five courses of pine face timber, new pine cross-ties and sleepers and new top planking.

The roadway opposite this basin and across the approach to the Island wharf was also thoroughly repaired by removing worn material, and replacing it with 1 foot of shale rock bedding, covered by 1 foot of new macadamizing stone.

The latrine opposite Custom House Square being decayed, was replaced by a new one, on a new concrete foundation.

Section 15.—On the inshore side of the basin the remaining part of the original joists and planking on the pile work was, at the close of navigation, taken up for renewal. About two-thirds of the renewal was made when a sudden rise of the river stopped the work, leaving it to be finished in the coming spring.

Section 20.—The lower inside corner of the Victoria Pier was badly damaged by the steamship "Oxenholme." and was repaired and altered in shape.

Sections 18 and 19.—From the Richelieu Pier to Victoria Pier the whole width of the wharf received a new shale rock roadbed and about 9 inches of new macadamizing stone.

The crib work across Bonsecours Basin was renewed with three courses of face timber, new cross-ties, sleepers and longitudinal top planking.

Sections 23 to 27.—From the foot of Brock street ramp to the middle of Section 27 new macadamizing stone was put on from the front of the wharf back to the railway tracks, with new shale rock foundation under the macadam in rear of the small basin, Section 26.

The crib work across the small basin, Section 26, was repaired with four courses of new pine face timber, new cross-ties, sleepers and longitudinal planking.

Sections 27 to 37.—Heavy repairs were made to the roadway in the early part of the summer.

In the Delorimier Avenue sewer a washout of earth occurred at the junction of the masonry and timber work, beneath the railway track on the wharf. Repairs were made, by consent of the city surveyor, at the city's expense.

Two slips were cut in the wharf at Section 32, to fit the gangways of the Boucher-ville ferry steamer, at the expense of the Richelieu and Ontario Navigation Company, and were fitted with mooring and fender posts.

Fourteen new countersunk iron mooring posts, with the necessary timber supports, were put in Sections 34 to 37, inclusive, instead of old oak ones.

Roadways.—Macadamizing stone has been spread on the wharves as follows:—

Section.	No. of Toises.	Section.	No. of Toises.
8.....	14	21.....	36
11.....	17	22.....	60
13 and 14.....	119	23 and 24.....	302
15.....	40	25.....	168
16.....	45	26.....	132
17.....	39	28.....	11
18.....	29	29.....	2
19.....	87	32 and 33.....	7
20.....	54	39 and 40.....	16

Total toises spread for maintenance of roadways, as above, 1,178.

Several of the footpath crossings throughout the harbour have been repaired and raised.

HARBOUR DREDGING PLANT AND DREDGING.

The harbour dredging plant was composed of three spoon or dipper dredges, three derricks and two tugs, with coal barge, scows and a floating shop, as detailed in the appended table. Besides these, a stone-lifter and three dumping scows were borrowed from the Government ship channel fleet for part of the summer.

Two dredges were wintered in Cantin's dry dock, Montreal; the other dredge, two derricks, one tug, the floating shop and two scows were wintered in the Lachine Canal near the dry dock; and one derrick, one tug, a coal barge and the remainder of the scows at the Boucherville Islands.

All repairs were made by the Commissioners' own men, the machinery work being mostly done in Mr. Cantin's machine shop, which was leased for the purpose.

Dipper dredge No. 4 was altered from a crane dredge to an Osgood boom dredge; swinging engines were added; wire ropes were substituted for chains for working the spuds, and large chains were put over the top of the forward spuds for holding them down, instead of the ordinary pins; and the machinery was overhauled generally. The sides and stern of the hull were entirely rebuilt and much strengthened; the bow was nearly all removed and also much strengthened; the deck was in great part renewed; the spud guides, both fore and aft, were renewed, and the framing connecting the forward spud guides were renewed and greatly strengthened. The alterations have been made for a working depth of 33 feet, and have added much to the digging rate and power of the dredge. Cost of alterations and rebuilding, \$9,196.

The other dredges and vessels received ordinary repairs.

Contracts for the main machinery and boiler for a new dipper dredge were awarded to the Bucyrus Steam Shovel and Dredge Company, of Bucyrus, Ohio, and to Mr. George Brush, of Montreal, in May last. The building of the boat was done by the Commissioners' men in Montreal. It was commenced at the end of June, and was launched on the 18th of November, and the machinery is now being fitted in at the island at St. Gabriel Locks.

In October the hull of the Government elevator dredge No. 3 was bought at auction at Sorel, and is now being fitted up as a floating shop, to take the place of the old floating shop, which has become very leaky and rotten.

A new bucket of 3½ yards capacity, with Canan's patent door, was built during the latter part of the summer, mainly for use on No. 4 dredge.

Tug "St. Louis," derrick No. 1, and the scows which wintered at Boucherville, were brought up to the harbour at different times between the 16th and 18th of April. The dredges and other derricks and vessels which were wintered in the canal all came out on 24th April, except dredge No. 4, which came out on 12th May. Dredge No. 6 was got to work on 28th April, No. 7 on 5th May, and No. 4, which was detained by her alterations, commenced on 24th May. The stone-lifter, which was borrowed from Government, was brought up from Sorel on the 14th of June, and commenced work on the 19th of June.

The stone-lifter stopped work and was returned to Sorel on 30th September. The dredges and derricks were stopped on 26th November, and sent to winter quarters in the Lachine canal on the 28th. Dredge No. 6, derrick No. 2 and the two tugs, all of which needed repairs, were laid up in Cantin's dry dock. Dredges 4 and 7, the new dredge No. 1, derricks Nos. 1 and 3, the floating shops and two scows, were laid up alongside the Island above the St. Gabriel Bridge. The coal barge and the remaining scows were laid up in the Wellington Basin.

The number of days during which the spoon dredges were on duty, reckoning every day except Sundays, from commencing in spring to leaving off in fall, was 157 days for No. 4, 182 days for No. 6 and 176 days for No. 7, making an aggregate of 515 days for the season.

The nominal working time is ten hours per day, which gives a total of 5,150 hours service; but the actual dredging time, after deducting that lost for repairs,

changing position, detention by vessels, short days in autumn, and all other causes, was reduced to 4,374 hours, or an average of 84·93 per cent. of the gross time of service.

The total outlay for working the Commissioners' own fleet, consisting of three spoon dredges, three unloading derricks, two screw tugs and the scows, was \$50,928.66, and this, as usual, represents the entire cost of working the plant and machinery, repairs, outfit, fuel, wages, salaries, insurance, and all other outlays, except interest on capital and depreciation of plant. It also includes the cost of altering and rebuilding dredge No. 4.

The cost of working the borrowed stone-lifter was \$2,744.85, making a total outlay of \$53,674.42.

The following are the comparative costs and quantities of dredging for 1890, and for previous years :—

Years.	Cubic Yards Dredged.	Total Cost.	Cost per Cubic Yard.	Remarks.
1875.....	151,719	\$ 68,979	\$ cts. 45	
1876.....	156,082	55,462	0 35 ^{5.0} ₁₀₀	
1877.....	173,499	45,103	0 26	
1878.....	211,731	48,748	0 23	
1879.....	189,609	41,006	0 21 ^{6.3} ₁₀₀	
1880.....	186,430	46,914	0 25 ^{1.6} ₁₀₀	
1881.....	170,764	54,128	0 31 ^{6.9} ₁₀₀	
1882..... {	187,339	53,598	28 ^{6.0} ₁₀₀	Spoon dredges and stone-lifters.
	9,429	13,254	1 40 ^{1.0} ₁₀₀	Elevator dredges.
	196,768	66,852	0 33 ^{9.0} ₁₀₀	Totals and average.
1883..... {	36,358	17,956	49 ^{3.8} ₁₀₀	Spoon dredges and stone-lifters.
	6,990	19,385	2 77 ^{1.0} ₁₀₀	Elevator dredges—lifting rock and boulders and clearing up.
	43,348	37,341	0 86 ^{1.4} ₁₀₀	Totals and average.
1884.....	125,648	49,468	0 39 ^{2.7} ₁₀₀	Spoon dredges and stone-lifters.
1885.....	69,494	28,563	0 41 ^{1.0} ₁₀₀	do do
1886.....	57,728	25,772	0 44	do do
1887.....	36,993	23,259	0 62	do do
1888..... {	73,150	36,690	0 50 ^{1.5} ₁₀₀	do do
	2,077	1,333	0 64 ^{1.0} ₁₀₀	Elevator dredges.
	75,227	38,023	0 50 ^{5.4} ₁₀₀	Totals and average.
1889..... {	205,283	54,574	0 26 ^{5.8} ₁₀₀	Spoon dredges and stone-lifter.
	9,420	2,996	0 31 ^{8.0} ₁₀₀	Elevator dredge.
	214,703	57,570	0 26 ^{8.1} ₁₀₀	Totals and average.
1890.....	187,670	53,674	0 28 ^{6.0} ₁₀₀	Spoon dredges and stone-lifter.

The cost and character of the dredging done in the different parts of the harbour last year are as follows. All the quantities are scow measurements, and the cost includes towing and unloading the material :—

Section 6 (Windmill Point).—A little dredging was done in the basin, where the deepening will be useful, but for the immediate purpose of obtaining stone for road foundations and other wharf repairs. Depth of water 25 feet; quantity dredged, 720 cubic yards; material, shale rock; cost, 55 cents per yard.

Sec. 42 and 43 (Hochelaga).—Dredging was done for the foundation of cribs and for clearing away schals in front of the new wharves, as already described under the head of new works. Depth of water, 30 to 33 feet; quantity, dredged 24,345 cubic yards; material, sand and hard silt with stones; cost, 36½ cents per yard.

Sec. 45 and 46 (Maisonneuve).—The dredging at Maisonneuve is for the formation of the new pier and basin, already described under the head of new works, and in this is comprised four-fifths of all the dredging done during last year. Depth of water, 29 to 35 feet; quantity dredged, 162,213 cubic yards; material, sand, tough silt and stones; cost, 25½ cents per yard.

Ship Channel through Harbour.—The work consisted of removing boulders from shoal places in the Current St. Mary, by means of a stone-lifter. Several causes conspired to make the work tedious and costly in proportion to the area covered, and still more so when measured by the cubic yards of boulders lifted. The principal part of the work was in the swiftest part of the current, where it runs at about seven miles per hour. The equipment of the stone-lifter was of inadequate strength for so strong a current and frequently broke the stones were few, of a small size, and scattered over a considerable area. Quantity of boulders lifted, 392 cubic yards, costing an average of \$6.98 per yard.

Appended are tables giving further particulars as to the dredging plant and work done.

Yours respectfully,

JOHN KENNEDY,

Chief Engineer.

HARBOUR Commissioners' Dredging Plant employed in the Harbour of Montreal in 1890.

Description of Vessel.	Hull.			When Built.	Engines.					Capacity of bucket.	Depth to which dredge can work.	Remarks.	
	Length over all.	Breadth of Beam.	Depth of Hold.		Kind of Engine.	No. of Cy-linders.	Diameter of Cylin-ders.	Length of Stroke.	Pressure of Steam.				
	Ft. in.	Ft. in.	Ft. in.				In.	In.	Lbs.	C. ft.	Ft.		
<i>Dredges.</i>													
Boom Spoon Dredge, No. 4.....	77-3	27-0	6-6	1872	Horizontal, non condensing.	{ 1	14	16	60	70	33	Altered in 1890, do 1881. Wooden hull.	
do do No. 6.....	77-0	27-0	7-6	1874			14	16	90	40	35		
Crane do No. 7.....	77-3	27-0	7-0	1874			14	16	60	70	32		
<i>Derricks.</i>													
Clam Shell Derrick, No. 1.....	56-8	23-9	5-9	.....	Horizontal, non condensing.	{ 1	8	12	75			do	
do do No. 2.....	57-0	23-6	5-9	1872			7	12	75		do		
do do No. 3.....	61-9	24-0	5-9	1875			10	12	75		do		
<i>Tug Boats.</i>													
21Tug St. Louis.....	67-0	15-0	8-7	1875	Vertical, non condensing.	{ 1	16	20	85			do	
217do St. Peter.....	71-0	16-6	8-6	1875			20	22	90		do		
<i>Barges.</i>													
Stahound (floating shop).....	103-4	21-5	7-6	1869								do	
A. G. Nish (coal barge).....	100-8	22-6	6-4	1874								do	
<i>Scows.</i>													
Sounding Scow.....	70-6	18-0	5-0	.....	All wood.							do	
Flat Scow (old).....	70-6	18-0	5-0	.....									do
do No. 5.....	70-5	18-3	5-4	1873									do
do No. 6.....	70-5	18-0	5-0	1873									do
do No. 7.....	70-4	18-0	5-4	1873									do
do No. 10.....	70-4	18-1	5-4	1874									do
do No. 11.....	70-0	18-3	5-1	1874									do
do No. 14.....	69-5	18-4	5-0	1875									do
do No. 15.....	70-4	18-2	5-0	1875									do
do No. 16.....	70-4	18-3	5-6	1875									do
do No. 17.....	75-0	20-2	6-0	1876									do
do No. 18.....	75-4	20-4	6-3	1876									do
do No. 19.....	75-6	20-3	6-5	1878									do
do No. 20.....	75-6	20-3	6-3	1878									do

In addition to the above there were borrowed from the Department of Public Works for use in the Harbour in 1890, Stone-lifter No. 2, and three large dumping scows.

HARBOUR DREDGING—Statement showing the Number of days worked by each Dredge, and the quantity dredged at each place in 1890.

Places at which Dredges Worked.	Vessels.	TIME OF SERVICE.		QUANTITIES DREDGED.			Character of Soil.
		Days.	Total Days.	Spoon Dredges.	Stone-lifter.	Total Cubic Yards.	
Section 6, Windmill Point.....	Dredge No. 6.....	4	4	720	.....	720	Shale rock.
do 41 and 42, Hochelaga.....	do No. 7.....	90	90	24,345	.....	24,345	Sand and hard silt, with stones.
do 45 and 46, Maisonneuve	do No. 4.....	157	.....	63,067	.....	.....	Sand, tough silt and stones.
	do No. 6.....	178	.....	68,130	.....	.....	do
	do No. 7.....	86	.....	31,005	.....	.....	do
	Stone-lifter No. 2.....	1	.....	.....	11	.....	Boulders.
	do.....	80 $\frac{3}{4}$	421 $\frac{1}{4}$	.....	392	162,213	do
Current St. Mary .....	.....	.....	80 $\frac{3}{4}$	.....	.....	392	.....
Totals .....	.....	.....	596	187,267	403	187,670	.....

HARBOUR DREDGING—Abstract of Work done by each Dredge in the Harbour of Montreal in 1890.

Vessels.	Places at which Dredges Worked.	TIME OF SERVICE.		QUANTITIES DREDGED, CUBIC YARDS.			Character of Soil.
		Days.	Total Days.	Spoon Dredges.	Stone- lifter.	Total.	
Spoon Dredge No. 4.	Section 45 and 46, Maisonneuve	157	157	63,067		63,067	Sand, tough silt and stones.
do	do 6, Windmill Point	4		720			Shale rock.
	do 45 and 46, Maisonneuve	178	182	63,130		68,850	Sand, tough silt and stones.
do	do 41 and 42, Hochelaga	90		24,345			Sand and hard silt with stones.
	do 45 and 46, Maisonneuve	86	176	31,005		55,350	Sand, tough silt and stones.
		80 ³ / ₄			392		Boulders.
Stone-lifter, No. 2.	Current St. Mary	4	81		11	403	do
	do 45 and 46, Maisonneuve		596	187,267	403	187,670	
Totals							

APPENDIX No. 23

REPORT OF THE HARBOUR COMMISSIONERS, QUEBEC FOR THE CALENDAR YEAR ENDED 31st DECEMBER, 1890.

(Under 38th Victoria, Chapter 55, Section 14.)

QUEBEC, 2nd January, 1891.

Hon. CHARLES T. TUPPER,
Minister of Marine and Fisheries, &c., &c.
Ottawa.

SIR,—In compliance with the requirements of the 30th Victoria, chapter 55, section 14, I have to report as follows on the doings of the Quebec Harbour Commissioners for the year 1890 :

CHIEF ENGINEER'S REPORT.

The annexed report from the Chief Engineer, Mr. Henry F. Perley, conveys all the information in relation to the harbour works, and the various additions and repairs made to them, and to the other properties of the Commissioners during the past year.

GRAVING DOCK.

The management of this property was continued in the hands of the Commissioners until the 17th October. On that date the dock was taken over and the direct control assumed by the Department of Public Works.

During that portion of the year 1890 that the graving dock was managed by the Commissioners, four vessels have used it, viz. :—

The first, steamer "Quebec"	3,056 tons gross.
The second, SS. "Sicilian"	1,333 do
The third, SS. "Norse King"	2,985 do
The fourth, SS. "Thornholme"	1,815 do

The steamer "Quebec" went out of dock at 6 a.m., May 6th, after being in all winter.

The SS. "Sicilian" was docked May 10th and undocked 14th May.

The SS. "Norse King" was placed in the dock on the 17th May and came out 4th July.

The SS. "Thornholme" was docked 1st August and undocked 11th September.

This valuable property of the Government has, while under the Commissioners control, been kept in the best condition, and has given entire satisfaction to those who had charge of the vessels which have used it.

The danger of the dock being flooded through a high spring tide or ice jam has been provided against by adding 2 feet to the height of the caisson, and on the recommendation of the Commissioners the property has been enclosed by a substantial fence, this latter work being carried out directly by the Department of Public Works.

LOUISE DOCKS AND WHARVES.

During the past season 81 steamers of a tonnage of 157,028 tons, and 59 sailing ships, of 65,865 tons, have used those docks, and the surface traffic necessitated the employment of 1,714 cars. Four of the steamers were partly loaded with cattle,

carrying over 2,000 head, and from the satisfaction expressed by all engaged in this undertaking, at the superior facilities afforded, the rapidity of loading, without any distress to the cattle, the Commissioners hope to see this trade greatly increased and a much larger number shipped from those works during the ensuing season.

Regulations for the Government of vessels using those docks and for the control of the surface traffic have been adopted by the Commissioners; these have been published and are placed in the hands of all interested, and it is intended to have them, or the most important of them, embodied in by-law form.

With a view of bringing the facilities afforded by the new works more prominently before the public, a short descriptive pamphlet, with plan of docks, wharves, buildings, etc., has been prepared by the Commissioners' engineer (Mr. Boswell), and 1,000 copies have been printed and largely distributed at all shipping points.

PREMISES LEASED.

All the different properties usually leased by the commissioners were continued in the occupancy of the various tenants, the only changes being, that the coal yard on the "Embankment" previously in the possession of Messrs. P. Gingras & Co., was leased to Messrs. Madden & Ellis. On the Cross Wall a piece of ground with moorage facilities and privilege of erecting a store was granted to Messrs. A. Fraser & Co., this lease, if the Commissioners desired, terminating on 1st May, 1891. The Quebec and Lake St. John, and Quebec, Montmorency and Charlevoix Railway Companies were given a site for a temporary station on the Louise Embankment, terminable at one month's notice; and M. E. Tweddell, ship smith, was granted a site for a forge on Pointe à Carey wharf. The Quebec and Lake St. John, and Quebec, Montmorency and Charlevoix Railway Companies, desiring some changes in the lease passed in 1888, empowering them to cross the Embankment, the Commissioners have submitted to those companies a proposition that they believe will be mutually advantageous. This the companies have now under consideration, and there is every probability of its being accepted.

REPAIRS TO PROPERTY.

With the exception of the Pointe à Carey wharf, which has been already reported as much in need of repairs (and which it is the Commissioners' intention to undertake next spring), the remainder of the property under the control of the Commission has been frequently inspected and kept in a thorough state of order. Details will be found in the Chief Engineer's report.

BALLAST.

Three thousand six hundred and fifty five tons of filling material, consisting of ballast taken from ships, and costing \$551, or an average rate of 15 cents per ton, has been obtained during the season.

The larger portion of this ballast was excellent granite, and has been utilized on the various properties of the Commission, as follows:—Roadway embankment, 1,000 tons; East India wharf, 1,065 tons. Pointe à Carey wharf, 850 tons; breakwater wharf, 530 tons; and of copper dross, 210 tons were used to overspread the Grand Trunk wharf.

OFFICE OF SECRETARY TREASURER.

On the 6th February Mr. A. H. Verrett, the secretary treasurer of the Commission, who had held that appointment since 1877, resigned, to accept the position of Provincial Auditor, and on the 10th of the same month his resignation was accepted, and Mr. James Woods, chief clerk, appointed acting secretary treasury, the duties of which he has since performed, as well as also those of the position previously held by him.

ICE BRIDGE, CAP ROUGE.

There seeming every probability that the ice bridge formed at Cap Rouge might prove an obstruction to the early opening of navigation, at the request of the

Commissioners a series of operations and explosions were carried out, under the supervision of Lt.-Col. C. E. Montizambert, Commandant R.S.A., Quebec, on the 1st, 19th and 21st April, resulting in the early removal of this obstruction.

ICE CUTTING.

Thirty-four thousand (34,000) blocks of ice, all for local use, have been cut during the winter of 1889-1890, a difference in excess of five thousand two hundred and twenty-six (5,226) of the harvest of the previous year.

To this report are annexed the various statements conveying the information yearly furnished to your Department in connection with the harbour, as also a complete statement of the Commissioners' accounts for the year, and a portion of the descriptive pamphlet, with plans, already referred to in the paragraph headed "Louise Docks and Wharves."

I have the honour to be, Sir,

Your most obedient servant,

JAS. WOODS,

Acting Secretary Treasurer.

OTTAWA, 30th December, 1890.

SIR,—I have the honor to submit the following with reference to the works under my charge:

LOUISE EMBANKMENT.

It having been found that the discharging of coal on the tidal portion of the Embankment interfered to a great extent with the usefulness of the railway tracks thereon, a new coal platform was placed at the extreme western end of the Embankment. This change necessitated an alteration in the position of that part of the railway track known as the "Curve," which was moved northwardly to connect with the main or centre line of tracks; and, at the same time, an additional connection was made with the northern railway track.

Owing to the crossing of the embankment by the Quebec, Montmorency and Charlevoix Railway, the track leading to Vallerand's coal oil shed was removed, and a new siding run in from the main line, giving more convenient access to the shed. An additional track was also laid to connect the rails laid over the Cross Wall.

By permission of the Commissioners, a baggage platform has been erected by the Canadian Pacific Railway Company, opposite the immigration buildings.

To replace the oil lights formerly in use, four electric lights have been placed on the Embankment, and two on the breakwater.

The Quebec, Montmorency and Charlevoix Railway Company have, under a provisional agreement with the Commissioners, erected a temporary station at the western end of the Embankment.

CROSS WALL.

The gates in the entrance to the wet basin were closed for the first time on the 14th of May last, and the experience of a whole season has proved that the works which have been constructed are capable of retaining the impounded water in a satisfactory manner, there not having been any appearance of leakage at any point.

A small addition has been made to the valve house, in which has been placed the machinery, engine, boiler, etc., for operating the draw-bridge.

A freight shed has been erected on the tidal harbour side of the cross wall, and a line of rails laid connecting with the tracks on the embankment. On the wet basin side a coal platform has been placed in position.

The roadways on the embankment and cross wall have been partially repaired with stone (granite) brought by ships as ballast.

A portion of the cross wall, south of the entrance to the wet basin, has been leased to Messrs A. Fraser & Co., on which, for the accommodation of their shipping business, they have built a freight shed.

The entrance gates to the wet basin were closed for the winter on the 12th November, and the draw-bridge was opened for the last time on the 1st December, on which date both basins were frozen over.

SOUTH WALL.

The portion of St. Andrew's street at the western end remaining unfinished last year, and requiring a small amount of filling, macadamizing a portion of the roadway, and laying down footpaths, was completed early in the season.

GENERALLY.

The offices formerly occupied by the Quebec Steamship Company having been destroyed, and store No. 10 having been considerably damaged by fire, the necessary repairs were proceeded with and brought to completion on the 24th May.

During the season repairs were made on the East India Wharf, so called; and the damage done to Atkinson's Wharf by the SS. "Nipigon" was made good at the expense of the owners of that vessel.

I have the honour to be, Sir,

Your obedient servant,

HENRY F. PERLEY,

Chief Engineer. Q.H.C.

THE LOUISE EMBANKMENT AND DOCKS, QUEBEC, CANADA.

These docks are now complete, and have been opened to shipping since May, 1890. They are situated on the point formed by the confluence of the Rivers St. Lawrence and St. Charles, being bounded on the north by the St. Charles River and on the east by the St. Lawrence, the principal business portion of the city forming the remaining sides. The docks consist essentially of an outer or tidal harbour, having a water area of about 20 acres and a general depth of between 26 and 27 feet of water at low water spring tides, with a quay frontage of 2,860 feet. Immediately along the face of the embankment quay wall the depth of water is 24 feet; but a vessel by standing out 10 feet from the wall can obtain a depth of 26 feet.

Spring tides rise 18 and neap tides 12 feet, the average rise of tide being 15 feet; but as the tide rarely falls to within $1\frac{1}{2}$ feet of the low water datum, the depth of water in the tidal basin is virtually greater than that given by the above mentioned depths.

AN INNER OR WET DOCK.

This basin has a water area of about 40 acres, and a general depth of water of 27 feet, and a quay frontage of 3,700 feet.

The depths of water along the quay fronts in the tidal harbour and wet docks are more particularly given on the accompanying lithogram of the docks.

Vessels wishing to enter the inner or wet dock can do so twice in the twenty-four hours, the gates being opened for a couple of hours at each time of high water, to permit of the exit and entrance of vessels.

AN EMBANKMENT AND CROSS WALL.

The embankment is about 4,000 feet long and 330 feet wide, and the cross wall 800 feet long and 150 feet wide.

On the embankment are four lines of railway tracks, connecting with the Canada Pacific, Lake St. John and Quebec, Montmorency and Charlevoix Railway Company's system, giving ample facilities for the handling of all kinds of freight.

Warehouses and freight sheds have been erected on the embankment and cross wall, for the protection of perishable goods.

The railway lines are so arranged that vessels can be discharged into or loaded directly from the cars.

The wet dock, where the water remains at a constant level, affords, for this reason, special facilities for the loading or unloading cheaply and expeditiously into or out of the railway cars, no extra charge being made for entering this basin. The northern quay wall, facing on the River St. Charles, is for the use of river craft and the lightening of lumber and other cargoes coming down by rail.

Special portions of the embankment and cross wall have been set apart for the discharging of coal, in order to avoid any interference or interruption to other business from this cause.

Large areas on the embankment have been reserved for the erection of cattle yards and grain elevators, which, when constructed, will enable the Commissioners to provide additional trade facilities. The entrance to the tidal basin is 200 feet wide, so that the largest vessels now navigating the St. Lawrence can enter without difficulty.

These docks are in the immediate vicinity of all principal shipping offices, banks and business portion of the city, and are lighted throughout by electricity.

Additional information may be obtained by applying to the Secretary-Treasurer, or the Chief Engineer to the Quebec Harbour Commission.

ST. GEORGE BOSWELL,
Harbour Engineer.

QUEBEC, 1890.

STATEMENT showing the movement of the Coasting trade of the Harbour for the season of navigation of 1890 (as reported at this office).

Cargoes by schooners ..	768
do bateaux ..	542
do barges ..	102
do steamboats ..	278
Tonnage ..	363,801
Crews, men ..	15,333
Passengers ..	78,071

DOMINION IMPORTS AT QUEBEC.

REPORT of Principal Entries Inwards by Vessels from all ports of the Dominion, at this Port for the Season 1890.

Imports.		Quantity.	Imports.		Quantity.
Apples.....	Brls.	11,425	Green, fish.....	Brls.	2,891
Ale and porter.....	do	14,296	Hides.....	Packages.	15,922
do.....	Hhds.	3,139	Horses.....		686
Almonds and nuts.....	Bags.	2,802	Herrings.....	Brls.	3,039
Agricultural implements.....		8,110	Hops.....	Bales.	2,532
Ases.....	Box.	3,282	Hardware.....	Brls.	946
Biscuits.....	Cases & box.	42,072	do.....	Cases & box.	8,802
do.....	Brls.	5,872	Hay.....	Bundles.	66,290
Boots and shoes.....	Box.	6,148	Iron.....	Packages.	23,232
Blacking.....	do	7,727	Leather.....	Bales.	18,316
Beef.....	Brls.	2,372	Linseed.....	Bush.	171
Barley.....	Bush.	8,138	Lard.....	Kegs.	8,842
Bran.....	Tons.	465	Machinery.....	Packages.	7,173
do.....	Bags.	5,050	Macaroni.....	Box.	17,435
Brooms.....	Packages.	7,184	Matches.....	do	235
Butter.....	Kegs.	422	Mineral water.....	Hhds.	678
do.....	Lbs.	156,784	Marble.....	Packages.	740
Books.....	Cases & boxes	9,168	Nails and spikes.....	Kegs.	34,327
Baking powder.....	Box.	21,268	do.....	Box.	6,003
Brick.....	M.	262	Oakum.....	Bales.	860
Board.....	Pieces.	433,418	Oats.....	Bush.	133,398
Bark.....	Cords.	1,647	Old iron.....	Cwts.	265
Blueberries.....	Box.	26,988	Pork.....	Brls.	2,002
Cigars.....	Cases.	2,966	Pease.....	Bush.	8,767
Cheese.....	Box.	12,029	Potatoes.....	do	20,145
Crockery.....	Puns.	17	Perch and pickets.....		2,500
do.....	Brls.	967	Raisins.....	Brls.	160
do.....	Crates.	821	do.....	Cases.	7,073
Coffee.....	Brls.	2,104	Rice.....	Bags.	19,763
do.....	Bags.	1,453	Rakes.....	Packages.	6,960
Cattle.....		6,128	Rosin.....	Brls.	158
Coals.....	Tons.	58,389	Refrigerators.....		639
Corn.....	Bush.	34,858	Sugar.....	Brls.	13,208
Canada plates.....	Box.	17,304	Shingles.....	M.	2,869
Cordages.....	Bales.	1,806	Sewing machines.....		2,392
Carpets.....	do	995	Starch.....	Box.	9,472
Champagne.....	Cases.	9,753	Soap.....	Cases & box.	21,012
Currants.....	Brls.	404	Spice.....	Cases & boxes	15,705
do.....	Cases.	6,853	Steel.....	Packages.	6,770
Candles.....	Box.	383	Seeds.....	Bags.	1,685
Clocks.....	Cases.	563	Shovels and spades.....	Packages.	4,865
Confectionery.....	Brls.	1,124	Soda carb.....	Brls.	690
Cod oil.....	Galls.	47,701	Salmon.....	do	213
Drugs.....	Brls.	2,209	Scales.....		759
do.....	Cases.	9,986	Scythe handles.....	Packages.	1,540
Deals.....	Pieces.	539,347	Seal oil.....	Galls.	7,000
Dry fish.....	Cwts.	135	Sheep.....		2,059
Eggs.....	Doz.	56,910	Sleepers.....		540
Eels.....	Brls.	390	Stationery.....	Cases.	16,668
Flour.....	do	15,702	Slates.....	Loads.	1,115
do.....	Bags.	66,096	Tea.....	Box.	28,605
Feathers.....	do	1,000	Tobacco.....	do	9,126
Furniture.....	Loads.	849	Tin.....	do	12,903
Fowls.....		2,754	Turpentine.....	Brls.	270
Fruit.....	Brls.	3,086	Trout.....	do	125
Gin.....	Cases.	6,922	Tar.....	do	265
do.....	Brls.	379	Wine.....	Qr. baskets.	271
Glue.....	do	251	do.....	Brls.	1,562
Grain.....	Bags.	21,223	do.....	Cases.	1,969
Glassware.....	Hhds.	59	Whiskey.....	Brls.	304
do.....	Brls.	1,248	do.....	Cases.	1,613
do.....	Crates.	1,344	Washboard.....	Packages.	1,701
do.....	Cases.	6,214	Wood.....	Cords.	23,782
Glass.....	Box.	21,627			

JAS. WOODS, Acting Sec'y-Treas.

QUEBEC HARBOUR COMMISSION.

COMPARATIVE STATEMENT of the Revenue of the Commission for the Years 1889 and 1890.

	1889.	1890.	Difference in 1890.	
	\$ cts.	\$ cts.	\$ cts.	
Tonnage dues.....	16,739 96	16,338 17	401 79	Decrease.
Import do	3,278 97	2,929 28	349 69	do
Export do	6,493 61	5,616 68	876 93	do
Harbour do	2,415 09	2,113 45	301 64	do
Property receipts.....	23,919 63	33,807 68	9,888 05	Increase.
Interest.	508 61	702 79	194 18	do
Beach and deep water lots.....	1,977 37	1,977 37		
Sundries	636 83		636 83	Decrease.
	55,970 07	63,845 42	7,515 35	Increase.

REVENUE AND EXPENDITURE.

DR.

CR.

1890. Dec. 31....	To	\$	cts.	1890. Dec. 31....	By	\$	cts.
	Tonnage dues.....	.....	16,388 17		Officers' salaries—	.....	.....
	Import do .....	.....	2,929 28		Engineer's department	2,998 00	.....
	Export do .....	.....	5,616 68		do	5,770 84	.....
	Harbour do .....	.....	2,113 45		Reporters' salaries.....	.....	8,768 84
	Property receipts.....	.....	33,807 68		Legal expenditure.....	.....	504 25
	Beach and deep water lots .....	.....	1,977 37		Property do .....	.....	485 66
	Interest.....	.....	702 79		Report and annexures, 1890-91 .....	.....	13,795 67
					Auditors for 1889 .....	.....	669 00
					Harbour master's expenses .....	.....	200 00
					Sundries .....	.....	369 50
					Interest.....	.....	4,107 50
					Profit and loss .....	.....	28,920 00
						.....	5,665 00
						63,485 42	63,485 42

JAS. WOODS,
Acting Secretary-Treasurer.

BALANCE SHEET of 31st December, 1890.

Dr.

Cr.

1890.			\$	cts.		\$	cts.
Dec. 31.	To	Office furniture.....			1890.		
		Amount at debit grantees, beach and deep water lots.....	3,471	57	Dec. 31	By	Beach and deep water lots.....
		Amount at debit sundries for rents, wharfage, &c.....	43,473	63			Receiver General.....
		Breakwater wharf.....	7,140	45			Profit and loss.....
		Point à Carey do.....	220,581	43			Taxes account.....
		East India do.....	276,175	31			Quebec harbour debentures.....
		Grand Trunk do.....	48,552	99			
		Wellington do.....	15,694	07			
		Atkinson's do.....	86,522	95			
		Reynar's do.....	51,080	70			
		Harbour improvements.....	9,918	29			
		Cash on hand.....	3,027,908	16			
		do deposit.....					
		Jackscrews' account.....	27,698	34			
		Tools' account.....	394	87			
		Graving dock revenue.....	1,534	00			
		Bills receivable.....	5,909	54			
		Suspense account.....	2,227	35			
			2,836	95			
			3,831,120	60			
							3,831,120 60

JAS. WOODS,

Acting Secretary-Treasurer.

We hereby certify that we have examined the books and vouchers of the Quebec Harbour Commission, for the year ending 31st December, 1890, and that the above is a correct copy of the balance sheet.

A. GABOURY, } *Auditors.*
A. AHERN, }

QUEBEC, 10th January, 1891.

QUEBEC.
STATEMENT of Assets and Liabilities per Balance Sheet of Date.

Dr., Cr.

1890.	ASSETS.	\$	cts.	\$	cts.	1890.	LIABILITIES.	\$	cts.	\$	cts.
Dec. 31	Real Estate—					Dec. 31	Quebec Harbour debentures.....			3,529,000	00
	Breakwater wharf.	220,581	43				Receiver-General			14,460	00
	Pont-a-Carcy do	276,175	31				Corporation for taxes			1,904	68
	East India do	48,552	99							3,545,364	68
	Grand Trunk do	15,694	07				SURPLUS.				
	Wellington do	86,522	95				Composed as follows—				
	Atkinson's do	51,080	70				Beach and deep water lots.			54,706	31
	Reynar's do	9,918	29				Profit and loss			231,049	61
	In re Beach and Deep Water Lots—			708,525	74						
	Capital at debit sundries.....	35,162	44								
	Arrears of Interest to 24th June, 1890.	8,311	19								
	do do 24th Dec., 1890.	988	68	44,462	31						
	Rents, Wharfage, &c.—										
	Due by fund as per balance sheet.....	7,140	45								
	Accrued but not due	1,848	27	8,988	72						
	Cash—										
	On hand.....	11	29								
	In bank.....	27,687	05								
	Harbour improvements.....			27,698	34						
	Graving dock revenue.....			3,027,908	16						
	Jackscrows, on hand.....			5,909	54						
	Tools			394	87						
	do			1,534	00						
	Office furniture.....			3,471	57						
	Bills receivable.....			2,227	35						
				3,831,120	60					3,831,120	60

J. A. WOODS,
Acting Secretary-Treasurer.

We hereby certify that we have examined the statement of Assets and Liabilities of the Quebec Harbour Commission, on the 31st December, 1890, and that we have found the same correct.

QUEBEC, 10th January, 1891.

A. GABOURY, }
A. AHERN, } Auditors.

HARBOUR COMMISSIONERS' OFFICE,

QUEBEC, 10th January, 1891.

To the Chairman and Commissioners, Quebec Harbour Commission :

GENTLEMEN,—We beg to report that we have audited the books and vouchers of the Commission for the year 1890, and we are pleased to state that we have found everything in order.

We have to thank the acting secretary for having given us all facilities possible.

We have the honour to be, Gentlemen,

Your obedient servants,

A. GABOURY, }
A. AHERN. } *Auditors.*

QUEBEC HARBOUR COMMISSION.

STATEMENT showing the cost of the Quebec Harbour Works up to the 31st December, 1890.

Nature of Works.	Total Expenditure, including Interest, &c.		Reduction effected under 51 Vic., Cap. 6, representing Interest and Sinking Fund paid out of Capital.		Amount of Harbour Commissioners' Sinking Fund, and accumulations which by 51 Vic., Cap. 6, has become part of Consolidated Revenue of Canada.		Net Reduction.		Net Cost of Works to Date.		Total Amount received from Federal Government		Total Amount Voted.		Designation of Statutes authorizing expenditure.		Amount Available.		Remarks.
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.			\$	cts.	
Harbour Improvements.....	3,182,648	94	Int. 378,670 05 S.F. 17,329 95		223,929 23		Int. 154,740 82 S.F. 17,329 95		3,027,908 16		2,806,000 00		3,252,000 00		36 Vic., Cap. 62 43 do 17 45 do 47 47 do 9 49 do 19 50-51 do 41		446,000 00		By taking the amount of \$396,000, deducted from the debt under the 50-51 Vic., Cap. 6, from the sum of \$446,000 indicated as available, then the amount available will be \$50,000. The debt of the Commission, amounting to \$723,000, redeemed under 36 Vic., Cap. 62, is not included in this statement.
			386,000 00				172,070 77												

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, 2nd January, 1891.

Certified,
JAMES WOODS,
Acting Secretary-Treasurer.

APPENDIX No. 24.

REPORT OF THE HARBOUR COMMISSIONERS OF THREE RIVERS FOR
THE CALENDAR YEAR ENDED 31ST DECEMBER, 1890.

SECRETARY'S OFFICE,
THREE RIVERS, 9th February, 1891.

SIR,—I have the honour, by the direction of the Harbour Commissioners of Three Rivers, to forward herewith, for the information of the Honourable the Minister of Marine, statements of receipts and disbursements of the commission for the year ended 31st December, 1890; also a synopsis of the operation and a comparative statement of trade and navigation of the port during the same year.

I have the honour to be, Sir,

Your obedient servant,

GEORGE BALCER,

Secretary.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

STATEMENT of Receipts and Disbursements.

RECEIPTS.

The Receipts were as follows :—

FROM THE COLLECTOR OF CUSTOMS, THREE RIVERS.

Harbour dues on goods, inwards.....	\$ 779 77	
do do outwards.....	358 88	
Tonnage dues on vessels.....	401 57	
Moorage do	95 25	
		\$ 1,635 47

LOCAL TRAFFIC.

Harbour dues on goods, inwards.....	\$ 156 23	
do do outwards.....	442 90	
Tonnage dues on vessels.....	227 88	
Commutation on goods and vessels.....	917 25	
Rent of wharf and moorage.....	597 57	
		2,341 83

Total Receipts \$ 3,977 30

DISBURSEMENTS.

The Expenditure was as follows :—

Salaries of officers and for collection.....	\$ 1,635 86	
Rent, fuel, office expenses, sundries.....	529 04	
Printing expenses.....	16 00	
Travelling expenses.....	19 70	
Collection refunded.....	243 94	
		\$ 2,444 54

CONSTRUCTION AND PROPERTIES ACCOUNT.

1st instalment on Dean's wharf property	\$ 2,000 00	
Repairs do do	1,148 54	
Repairs on Commissioners' property	316 87	
Engineer's office	79 25	
		3,544 66

Total Expenditure..... \$ 5,989 20

Dr.		BALANCE SHEET.		Cr.	
1890.	\$ cts.	\$ cts.	1890.	\$ cts.	\$ cts.
Jan. 1	Deposit in bank...	3,540 94	Dec. 31	Expenses for adminis- tration	2,444 54
	Cash on hand.....	217 55		Expenses for harbour works	1,544 66
		3,758 49		Expenses on purchase of wharf property....	2,000 00
Dec. 31	Harbour dues col- lected.	3,977 30		Deposit in bank.....	1,698 75
				Cash on hand.....	47 84
					1,746 59
		7,735 79			7,735 79

STATEMENT of Number and Tonnage of Sailing Vessels and Steamers entered Inwards and Outwards at the Custom House at Three Rivers, for the Year ending 1890.

Return of Vessels Inwards.			Return of Vessels Outwards.		
	No.	Tonnage.		No.	Tonnage.
Total of vessels arrived.....	28	28,877	Total of vessels cleared.....	28	23,877
Number of steamers.....	9	8,490	Number of steamers.....	9	8,490
do sailing vessels.....	19	15,387	do sailing vessels.....	19	15,387
Nationality.			Nationality.		
British and Canadian (Steamers.....)	8	7,518	British and Canadian.....	14	12,740
(Sailing vessels.....)	6	5,222	Scandinavian.....	13	10,165
Scandinavian, sailing vessels.....	13	10,165	Spanish.....	1	972
Spanish, sailing vessels.....	1	972			
Sailing from.			Sailing for.		
Inland Ports.....	8	6,701	Great Britain.....	17	16,134
Lower Provinces.....	5	4,503	Lower Provinces.....	6	5,472
Great Britain.....	6	5,503	Canadian Ports.....	2	955
Spain.....	2	2,055	Australia.....	1	825
United States.....	1	1,522	Portugal.....	1	366
Scandinavia.....	5	3,247	Newfoundland.....	1	125
Germany.....	1	366			

LOCAL TRAFFIC.

	Number.	Tonnage.
Bateaux, not registered	173	.....
Schooners.....	17	1,263
Barges.....	50	5,675
Steamboats.....	85	9,501
American barges.....	16	1,602
	341	18,041

Richelieu and Ontario Company's steamboats and local boats not included.

SYNOPSIS OF OPERATION AND COMPARATIVE STATEMENT OF EXPORTS AND IMPORTS DURING THE YEAR ENDING
31ST DECEMBER, 1890.

LUMBER.

The total amount of lumber shipped during the season was 46,847,000 feet, B. M., as against 42,778,000 in 1889. Although slightly superior in 1890, the movement in our staple continue to remains stationary.

The direct trade with Great Britain was more active, the quantity shipped being 20,500,000 feet, as against 14,750,000 in 1889, and only 9,500,000 in 1888. Still it does not yet reach our former figures.

We have no transaction to mention with South America in 1890. Only one small cargo was shipped to Portugal, and a still smaller quantity was send to Australia as sample.

To the United-States we shipped 20,118,000 feet, as againts 18,366,000 feet in 1889.

In our report of last year we mentioned the causes of the decline in the direct transaction on trans-oceanic markets. The slight increase of the present season does not affect our argument; and although the price of lumber continues to rule very low, we cannot help repeating that the absence of the necessary facilities in piling grounds and wharf accommodation is the real, if not the sole cause of the secondary position to which has been reduced this important section of the shipping trade in our port.

HAY.

Our transactons with the United States continue to increase, and this is spite of the McKinley Bill. But if the exports have grown in volume, the value of some articles has greatly diminished, particularly hay which sold, on an average, at \$9 in 1889 and only \$7.50 in 1890. Previous to the raise of duty to \$4 per ton in the United States, the same article sold as high as \$12 per ton.

COAL.

In our imports we have no great change to mention, with the exception that our coal trade is steadily increasing. During last summer's coal handlers' strike in Montreal we missed a good chance to double, if not triple, our import in that article, as numerous applications were made for wharf accommodation, and great pressure has been exercised upon the Harbour Commissioners by the Canadian Pacific Railway Company and other companies to get the necessary space to unload the coal in our harbour. But the regular trade having no room at all to spare, and the Harbour Commissioners not being able to provide the required accommodation, the vessels were refused, and forced to go elsewhere. At the Canadian Pacific Railway's suggestion an investigation was held on this occasion, by which it has been proven that each coal steamer gains at least one trip during the season when discharging at Three Rivers, instead of going up to Montreal; also, that a great saving in time and money is effected by unloading the coal direct from the vessel to the cars.

Already, in the earlier part of the year the firm of Muir & Son—which had a branch of their coal business in Three Rivers—insisted upon the Harbour Commissioners to provide them with further accommodation. The Commissioners adressed themselves to the Department of Public Works for permission to acquire "Dean's Wharf," in the western portion of the harbour. This would have enabled them to accommodate the trade, and in the same time separate the coal entirely from the lumber wharfs, thus avoiding the constant friction and the legitimate complaint of the lumber merchants as to the injurious effect the handling of the coal causes upon their lumber in the neighbourhood. The Department not being able to entertain our demand, the firm of Muir & Son, after three years of successful working in our place, abandoned Three Rivers before the opening of navigation.

The incident of the coal handlers' strike following in rapid succession the forced retreat of such an important firm, the Commissioners deemed themselves justified in buying "Dean's Wharf." Unfortunately, they did not come into possession of the property soon enough to avoid above named loss, neither to benefit of the impromptu offers of the various companies. But the Canadian Pacific Railway, convinced of the serious benefit resulting for its company in making use of our port, negotiations to the effect of establishing a general coal depot at Three Rivers have been engaged and are actually under discussion. We have therefore good reason to believe that by next season we will have a far larger increase in our coal import.

LIVE STOCK.

We may also mention that the extraordinary development of the cattle trade, and particularly the movement created lately as to the future of this great Canadian export, will have for effect to divert a portion of the cattle shipping from the port of Montreal—at least during a certain portion of the summer months. The situation of Three Rivers being recognized as one of the best, if not the very best, on the St. Lawrence for this particular trade, we have reason to believe that the Dominion Government, sufficiently informed by the recent investigation as to the proper protection of this important traffic, will consider the position and also the claims of our port and allow the Harbour Commissioners to provide for additional accommodation, in the shape of a wharf in our Section No. 2. Recent events having also fully justified the opinion expressed by our Harbour Commissioners from the very date of their entering their commission, we merely refer to former reports, at the same time not neglecting the enquête, held under your personal supervision on 15th January, 1891, in which it was demonstrated that all that is needed to carry on the cattle shipping trade properly at Three Rivers is the construction of this new wharf, in close proximity of the "Commune," the place where the cattle from the west will have to be landed.

Thoroughly convinced as to the intention of the Government to give the fullest satisfaction to the public in Great Britain, we do not doubt that the Honourable Minister of Public Works will consent, and put the Harbour Commissioners in a position to improve a trade in which are not only engaged large material interests, but also the good reputation of our Canada.

CONSTRUCTION.

During last summer about 200 feet of cribwork, with about 20 feet of water, have been constructed between the Commissioners' and Richelieu Company's wharves.

The City Corporation wharf has also been enlarged, and built out to about 22 feet of water, in a line with the Richelieu and Gagnon's wharf—offering thus very acceptable additional facilities to the trade in Section No. 1 of our harbour.

Dean's Wharf, in Section No. 2, now the property of the Commissioners, has been repaired during the winter. The dredging for the removal of accumulated rubbish and other impediments will be effected as soon as the river is clear of ice, so that by the very beginning of navigation this fine wharf will be ready for the shipping, with a depth of, at least 25 feet of water.

The aggregate volume of trade for 1890 amounted to \$982,981.
Divided into:—

Exports	\$823,332
Imports.....	159,649

As against a total of \$1,023,692 in 1889.

The exports are divided as follows:—

To the United States—	
31,730 tons of hay, valued at.	\$235,117
6,333 sheep.....	24,747
67 horses.....	7,294
539 other animals.....	200

29,523 dozen eggs	4,996	
15,860 bush. potatoes.....	4,856	
95 bush. peas	76	
20,118,000 feet lumber.....	177,930	
9,930,000 shingles	24,040	
30,614 railroad ties.....	4,625	
9,145 telegraph poles	4,978	
Other wood.....	1,545	
4,290 cords pulp wood	11,827	
6,509,700 cords wood pulp.....	51,558	
1,760 cords hemlock bark.. ..	8,910	
Raw furs.....	3,337	
120½ tons oxide of iron.....	1,868	
Personal effects.....	6,687	
Miscellaneous	12,388	
		\$586,979
To Great Britain—		
3,310,750 ft. B.M. pine deals.....	\$ 56,263	
16,838,000 do spruce deals.....	155,173	
421,000 do boards.....	6,297	
		217,733
To Portugal—		
337,000 ft. spruce deals.....		2,906
To Austrslia—		
38,500 ft. pine deals.....	\$456	
19,000 ft. spruce deals.....	185	
Laths.....	160	
		801
To Newfoundland—		
Provisions, general merchandise and shanty riggings.....		11,300
To Germany—		
Furs		3,613
Total Exports.....		\$823,332

The Imports were as follows :—

From the United States—

Flour and provisions, value.....	\$ 6,131
Molasses.. ..	5,397
2,720 tons coal.....	10,460
266 do coke.....	1,529
14 do pig iron.....	320
Moulders' sand, clay, etc.....	914
Leather and leather goods.....	6,011
Hides and furs.....	4,238
Machinery, hardware, etc.....	1,749
Lead and brass, manufactures of	1,481
Platine, silver, etc.....	473
Woollen and cotton goods	1,682
India rubber goods.....	221
Manufactures of wood.....	474
Musical instruments.....	158
Glass goods.....	727
Books and prints.....	598
Acids and drugs.....	595
Tobacco.....	406
Wall paper.....	281

Grindstones	909	
Dying and tanning articles.....	4,091	
Packages by mail	1,276	
Miscellaneous	10,153	
		60,271
From the Lower Provinces—		
13,200 tons coal.....		39,500
From Great Britain—		
Woollen and cotton goods	\$18,558	
Dry and fancy goods.....	2,954	
Hosiery and smallware	1,533	
India rubber and oilcloth.....	834	
Leather	2,239	
Furs	97	
Divers.....	28	
		26,243
From Belgium—		
Machinery.....		19,636
From Germany—		
Leather.....	\$4,433	
Clothing.....	120	
Divers	134	
		4,687
From Holland—		
5,797 galls. gin.....	\$2,258	
Packages	1,681	
		3,939
From France—		
Books.....	\$1,193	
Scientific instruments.....	170	
Brandy.....	833	
Wine.....	157	
Champagne	128	
Furs	209	
Leather.....	200	
Fancy goods	124	
Church ornaments.....	78	
Divers.....	286	
		3,378
From Austria—		
Leather.....		1,360
From Spain—		
1,223 galls. wine.....		635
Total Imports.....		\$159,649

The whole respectfully submitted.

GEORGE BAKER,
Secretary Three Rivers Harbour Commission.

WM. SMITH, esq.,
Deputy Minister of Marine,
Ottawa.

APPENDIX No. 25.

REPORT OF THE HARBOUR COMMISSIONERS OF NORTH SYDNEY, C.B.,
FOR THE CALENDAR YEAR ENDED 31st DECEMBER, 1890.

NORTH SYDNEY, 7th January, 1891.

The Honourable CHAS. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—In accordance with the provisions of section 4 of 42 Victoria, chapter 30, we have the honour to submit our report for the year 1890.

There is a continual increase in the arrivals of the shipping of the port, and also in the coal exports. The Harbour Master's report, annexed, shows an increase of 33 per cent. in the shipping arrivals, and 13 per cent. in the coal exports over 1889.

It is the Commissioners' wish to further complete the works on the North Bar. It is not necessary to reiterate the importance of those improvements, they having already been referred to in our previous reports. They, however, most respectfully request that the Government will further assist towards the completion of these works at as early a day as circumstances will permit.

The receipts and disbursements for 1890 were as follows:—

RECEIPTS.	\$ cts.	DISBURSEMENTS.	\$ cts.
To Cash on hand from last year.....	813 35	By A. C. Bertram's account.....	14 00
Receipts from Collector of Customs...	1,621 58	Harbour Master's salary, G.B.M.	400 00
		G. B. Moffatt's boat hire.....	50 00
		do account.....	6 00
		J. R. Lithgow, for interest.....	210 00
		Bank charges remitting.....	0 61
		Chairman M. J. Phoran's salary.....	150 00
		Telegram.....	0 52
		Secretary's salary.....	250 00
		F. J. Musgrove, for tracing sent to Department.....	1 50
		D. McCormack, working at ballast...	1 00
		John McPhee do ..	1 00
		Treasurer W. H. Moore's account, 5 per cent. on \$1,621.58.....	71 07
		Cash to balance.....	1,269 23
	2,434 93		2,434 93
Cash to balance.....	1,269 23		

We have the honour to be, Sir,
Your obedient servants,

M. J. PHORAN,
M. C. MOORE,
GEO. H. DOBSON.

HARBOUR MASTERS' REPORT FOR 1890.
COMPARATIVE STATEMENT of Arrivals and Tonnage of Cargoes, Orders and Steamers, for Bunker Coals.

Class of Vessels.	1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.		1888.		1889.		1890.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Ocean steamers	197	197,242	253	250,470	174	178,566	27	212,467	271	240,074	240	226,468	289	241,849	292	280,943	335	259,493	423	372,903	391	339,164
Coasting steamers	43	15,297	55	25,703	128	80,759	178	40,732	121	35,303	71	17,475	77	16,044	82	19,810	160	26,191	86	19,480	90	21,774
Ships	13	16,768	9	11,076	5	5,989	11	10,480	11	13,148	5	5,523	5	7,151	6	7,528	6	8,238	5	6,364	10	16,578
Barques	124	77,882	136	44,753	110	62,380	105	53,157	159	80,039	133	62,827	150	73,219	110	49,056	78	32,010	81	36,921	126	69,407
Brigantines	189	45,524	125	25,854	185	45,969	149	36,186	189	36,597	166	33,998	86	19,368	102	18,323	109	18,301	100	18,240	80	17,250
Schooners	607	45,277	439	35,226	498	75,829	826	64,878	856	63,429	702	54,266	861	62,988	672	52,808	591	51,272	749	56,895	1118	76,457
Totals	1173	297,290	1017	401,082	1100	455,492	1486	417,900	1607	469,189	1317	400,557	1468	420,619	1264	428,528	1279	395,505	1444	510,803	1815	540,630
Number of seamen	12,385		10,147		11,927		14,279		15,730		15,014		14,803		13,313		15,776		18,846		17,557	

COAL EXPORTS.

COMPARATIVE Statement of the Coal Shipments from the Harbour of North Sydney, embracing all the Mines, since 1879.

Years.	Sydney Mines.	Victoria.	Inter-national.	Old Bridgeport.	Reserve.	Totals.
1879.	108,259	.....	21,523	.....	17,269	147,051
1880.	115,307	.....	58,897	.....	13,614	187,818
1881.	133,135	.....	78,285	.....	68,884	285,304
1882.	133,623	.....	102,927	.....	74,432	310,982
1883.	131,673	154	96,997	.....	104,772	333,601
1884.	131,124	10,408	80,798	3,045	86,550	312,140
1885.	105,124	41,066	63,750	12,290	74,183	296,418
1886.	122,000	46,745	105,590	12,500	84,500	371,335
1887.	147,000	65,000	103,000	12,000	81,500	408,500
1888.	130,000	78,000	102,000	25,000	105,000	440,000
1889.	125,000	88,900	123,666	25,000	106,771	469,337
1890.	150,000	75,000	135,000	26,000	140,000	526,000

PORT OF NORTH SYDNEY.

COMPARATIVE Statement showing the dates of the Closing and Opening of Navigation, also the first Arrival from, and the last Departure to Sea, for the past eleven years.

Years.	Closing of Navigation.	Opening of Navigation.	Last Departure.	First Arrival.
1879.	February 16..	March 2..	January 24..	March 3
1880.	do 4..	April 10..	do 17..	April 13
1881.	January 22..	February 25..	do 19..	do 1
1882.	do 27..	May 2..	do 24..	May 2
1883.	do 19..	March 28..	do 17..	April 1
1884.	do 16..	April 22..	do 16..	do 27
1885.	do 22..	do 24..	February 15..	do 25
1886.	February 28..	do 4..	do 16..	do 15
1887.	do 21..	do 2..	January 27..	do 28
1888.	January 19..	March 25..	do 16..	do 7
1889.	February 23..	do 6..	do 27..	March 30
1890.	do 23..	do 6..	do 27..	do 30

The buoys were taken up 5th January, 1890, and put out 1st May, 1890.

Respectfully submitted,

GEO. B. MOFFAT,
Harbour Master.

APPENDIX No. 26.

REPORT OF THE HARBOUR MASTER OF HALIFAX, N. S., FOR THE
CALENDAR YEAR ENDED 31ST DECEMBER, 1890.

HARBOUR MASTER'S OFFICE,

HALIFAX, N.S., 23rd January, 1891.

SIR,—I have the honour to submit herewith my statement for the year ending 31st December, 1890, showing the number, rig and tonnage of vessels subject to harbour master's dues that entered this port during the year. I also beg to enclose a receipt for \$19.50 paid into the Bank of Montreal to the credit of the Receiver General, being the amount reverting to the Government as per said statement.

I have the honour to be, Sir,

Your most obedient servant,

E. O'BRYAN,

Harbour Master.

WM. SMITH, Esq.,

Deputy Minister of Marine,
Ottawa.

RECEIPTS and Expenditure of the Harbour Master, Halifax, N.S., from 1st January to 31st December, 1890.
Dr.

—	No.	Rig.	Tonnage.	£	cts.	—	£	cts.
To Fees collected from	166	Steamers	255,164	782	50	By Amount allowed Harbour Master for expense and remuneration	1,800	00
do	1	Ships	991	5	00	Amount paid to credit of Receiver General	19	50
do	89	Barques	52,703	330	50			
do	5	Barquentines	1,917	13	50			
do	19	Brgs	2,270	16	50			
do	71	Brigantines	11,838	111	50			
do	522	Schooners	47,352	560	00			
				1,819	50			1,819 50

E. O'BRYAN,
Harbour Master.

Sworn to before me at Halifax, N.S., this }
thirteenth day of January, 1891.
PATRICK M. DUGGAN, J. P.

APPENDIX No. 27.

TABLE showing the names of Ports proclaimed under certain Dominion Acts, the provisions of which are found in Chapter 86, Revised Statutes of Canada, for the appointment of Harbour Masters; the dates of proclamation; the names of the Harbour Masters appointed; the dates of the appointment of Harbour Masters; the amount which each of their Salaries is not to exceed; the amount of Fees collected by each of them during the Calendar Year ended 31st December, 1890, and the overplus, if any, paid into the credit of the Receiver General.

PROVINCE OF ONTARIO.

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed.	Amount collected in 1890.	Amount paid over to Receiver-General.
				\$ cts.	\$ cts.	\$ cts.
Collingwood.....	3 March, '77	Andrew Lockerie	3 March, '77	200 00	173 00	
Goderich.....	28 April, '76	Thomas Dancey.....	22 April, '76	300 00	73 50	
Midland.....	22 July, '82	E. Polkinghorn.....	22 July, '82	200 00	194 50	
Parry Sound.....	24 March, '83	John Galna.....	19 March, '83	200 00	118 50	
Penetanguishene.....	2 Feb., '77	Francis Densome.....	3 June, '81	200 00	22 00	
Port Arthur.....		Wm. F. Davidson.....	11 May, '84	400 00		
Rondeau.....	4 May, '78	W. R. Fellowes.....	17 Dec., '88	100 00	137 35	
Southampton.....	23 Sept., '75	W. H. Johnston.....	— Oct., '82	100 00	70 50	
Sarnia.....	25 July, '85	Robt. McAdam.....	3 May, '86	300 00	Nil.	

PROVINCE OF QUEBEC.

Amherst.....	14 Sept., '78	John Cassidy.....	2 Sept., '78	200 00	8 00	
Carleton.....	8 Dec., '81	Joseph H. Landry.....	8 Dec., '81	200 00		
Chicoutimi.....	17 June, '85	Ainsworth Sturton.....	8 June, '86	200 00	104 50	
Gaspé.....	25 Sept., '74	Francis J. Eden.....	3 April, '89	500 00	77 50	
House Harbour.....	9 Aug., '87	Peter Bourgue.....	9 Aug., '87	200 00	18 00	
Lachine.....	19 April, '80	Louis Paré.....	19 April, '80	300 00		
Matane.....	19 Oct., '77	G. L. Pelletier.....	11 Aug., '88	200 00	28 00	
Métis.....	7 Feb., '78	P. F. Leggatt.....	7 Feb., '78	200 00	28 00	
New Carlisle.....	25 Feb., '89	Digby Smollett.....	25 Feb., '89	200 00	7 00	
New Richmond.....	15 April, '82	Henry Leblanc.....	3 April, '82	200 00	22 00	
Oak Bay.....	27 March, '80	Jas. D. Sowerby.....	22 March, '80	200 00		
Paspébiac.....	12 May, '77	Hugh Christie.....	22 May, '77	150 00	2 50	
Port Daniel.....	25 March, '89	John Enright.....	11 Sept., '90	200 00	1 00	
Rimouski.....	5 March, '77	Jos. St. Laurent.....	30 May, '78	200 00	3 50	
Rivière Ouelle.....	22 July, '82	Achilles Fraser.....	22 July, '82	100 00		
St. Thomas.....		Eug. Hammond.....	21 Dec., '85	200 00	90 00	
St. John's.....	{ Within the Harbour of Montreal.	Alfred Pinsonneault.....	8 March, '88	500 00	649 50	149 50
Sorel.....		Pierre Guevremont.....	20 May, '90	300 00	294 50	

TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*

PROVINCE OF NEW BRUNSWICK.

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed.	Amount collected in 1890.	Amount paid over to Receiver-General.
				\$ cts.	\$ cts.	\$ cts.
Bathurst	30 May, '73	James Andrew	23 March, '81	200 00	75 50	.....
Black's Harbour and Beaver Harbour	22 Sept., '83	E. W. Cross	17 Sept., '83	100 00	19 00	.....
Buctouche	30 May, '73	Melem Chase	30 July, '90	100 00	41 50	.....
Campbelltown	30 May, '73	William Mott	9 July, '73	200 00	33 50	.....
Campobello	30 May, '73	John Benjamin Beatty	7 July, '73	100 00	40 00	.....
Caraquet	30 May, '73	Louis Poirier	17 April, '83	150 00	17 00	.....
Chatham	30 May, '73	Wm. Johnston	25 June, '79	300 00	364 00	64 00
Cocagne	30 May, '73	John Brooks	7 July, '73	100 00	2 00	.....
Dalhousie	30 May, '73	Wm. S. Smith	19 March, '88	200 00	159 50	.....
Dorchester	30 May, '73	E. Palmer	11 April, '87	200 00	20 00	.....
Fredericton	30 May, '73	Vacant .....	.....	.....	.....	.....
Grand Manan, North	18 Sept., '76	James A. Pettis	21 May, '88	100 00	.....	.....
Grand Manan, South	22 Aug., '89	Abel Wilcox	22 Aug., '89	100 00	1 50	.....
Grea Shemogue	17 May, '75	Fred. Chapman	21 May, '88	100 00	.....	.....
Harvey	30 May, '73	H. E. Graves	8 July, '84	100 00	9 50	.....
Hillsborough	30 May, '73	W. H. Carlisle	20 May, '90	150 00	67 00	.....
Ledge of St. Stephens	30 May, '73	Charles Young	22 April, '76	100 00	2 50	.....
Letete, &c.	22 Sept., '83	Jos. Chambers	17 Sept., '83	100 00	8 50	.....
Little Shippegan and Miscou Gully	1 May, '86	Donald Harper	19 April, '86	100 00	1 00	.....
Little Shemogue	5 Sept., '88	Fred. Chapman	5 Sept., '88	100 00	.....	.....
Moncton	30 May, '73	Vacant .....	.....	.....	.....	.....
Musquash	26 March, '74	George Rose	16 May, '87	100 00	58 50	.....
Newcastle	30 May, '73	John Niven	7 July, '73	300 00	245 00	.....
North Joggins	30 May, '73	Vacant .....	.....	.....	.....	.....
Port Elgin & Baie Verte	6 Feb., '73	Jacob Silliker	6 Feb., '78	200 00	.....	.....
Pokemouche	7 July, '83	Vital Lousier	23 June, '83	100 00	.....	.....
Richibucto	30 May, '73	James Alexander Jardine	11 May, '74	200 00	90 00	.....
Rockland	30 May, '73	Vacant .....	.....	.....	.....	.....
Sackville	30 May, '73	Alexander Ford	28 June, '88	200 00	17 00	.....
St. Andrews	30 May, '73	John Wren	6 May, '84	100 00	110 50	10 50
St. George	30 May, '73	Alexander Dick	29 Aug., '84	100 00	14 50	.....
St. Martin's and Quaco	14 May, '74	Joseph Carson	14 May, '74	100 00	10 00	.....
Shediac	30 May, '73	Alexander McQueen	19 May, '76	300 00	103 00	.....
Shippegan	30 May, '73	John DeGrace	10 Aug., '80	100 00	7 00	.....
Tracadie	7 May, '74	Vital Arceno	9 July, '75	100 00	3 50	.....
Waterside	3 Sept., '89	Wm. Riley Copp	3 Sept., '89	100 00	Nil.	.....
West Isles	4 Feb., '79	Thos. K. Parker	4 Feb., '79	200 00	.....	.....

PROVINCE OF NOVA SCOTIA.

Advocate	15 May, '80	Samuel Morris	10 May, '80	100 00	6 00	.....
Annapolis	12 March, '75	William Cumming	16 May, '79	200 00	.....	.....
Apple River	14 Aug., '86	Robt. Fields	9 Sept., '90	200 00	26 00	.....
Arichat	22 April, '79	Francis Marneau	6 May, '84	200 00	79 50	.....
Baddeck	23 Sept., '75	Alex. McAulay	10 Dec., '90	100 00	.....	.....
Barrington	10 July, '82	Thos. I. Banks	23 Nov., '85	200 00	22 50	.....
Bayfield	11 July, '79	John McDonald	11 July, '79	200 00	Nil.	.....
Bay St. Lawrence	21 April, '87	G. Zwicker	21 April, '87	200 00	.....	.....
Bear River	25 Sept., '74	Robert Austin	4 April, '87	100 00	50 50	.....
Beaver Harbour	24 July, '80	Henry Hawboldt	22 Sept., '88	100 00	Nil.	.....
Big Harbour	9 June, '83	Donald McKenzie	28 May, '83	100 00	.....	.....
Bourgeoise River	1 May, '86	E. C. Bouchie	19 April, '86	100 00	10 00	.....
Bridgewater	6 May, '74	Joseph Robins Wyman	6 May, '74	100 00	33 50	.....
Bras d'Or, including New Campbellton	6 May, '74	John McNeil	10 Dec., '90	200 00	.....	.....

TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*PROVINCE OF NOVA SCOTIA—*Continued.*

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed.	Amount collected in 1890.	Amount paid over to Receiver-General.
				\$ cts.	\$ cts.	\$ cts.
Cape Canso.....	6 June, '76	William Walsh	6 June, '76	100 00	112 00	12 00
Cape Negro or North-East Harbour.....	18 May, '81	A. D. Perry	18 May, '81	200 00	15 00	.....
Chester.....	8 Sept., '83	Arch. Evans	4 Aug., '83	100 00	15 00	.....
Cheticamp.....	20 April, '76	Fulgence Ancoin.....	15 April, '76	100 00	3 50	.....
Clarke's Harbour.....	1 June, '81	J. B. Brannen	1 June, '81	200 00	15 50	.....
Clementsport.....	1 May, '77	Thomas Tracey	1 May, '77	100 00	12 50	.....
County Line to Grand Narrows.....	9 June, '83	Hugh Campbell	28 May, '83	100 00	.....	.....
Cow Bay.....	3 March, '79	Hector McDonald	3 March, '79	400 00	130 00	.....
Crow Harbour.....	30 Sept., '88	John Ehler, 3rd.....	5 May, '90	100 00	1 50	.....
D'Escousse.....	23 Jan., '85	Arthur Pertus	6 March, '90	100 00	37 00	.....
Digby.....	19 Feb., '78	James A. Hughes.....	19 Feb., '78	300 00	66 00	.....
East Bay.....	25 Aug., '83	Donald McInnis	5 April, '86	100 00	.....	.....
Fourchier.....	22 May, '89	Neil McLean	22 May, '89	100 00	1 50	.....
Gabrouse.....	3 March, '79	John Wm. Hardy.....	2 Nov., '86	100 00	7 66	.....
Glasgow and Cape Breton Pier.....	30 Oct., '80	Angus McQuarrie.....	30 Oct., '80	300 00	296 50	.....
Guysboro'.....	15 Jan., '89	Havelock Torey.....	15 Jan., '89	100 00	21 50	.....
Halifax.....	No proclamation required by Act.....	Edward O'Bryan.....	18 March, '80	1,800 00	1,819 50	19 50
Hantsport.....	27 June, '84	Edward Davison.....	27 June, '84	225 00	220 00	.....
Ingonish, North Bay of.....	22 March, '81	William Thompson.....	24 March, '81	200 00	Nil.	.....
Ingonish, South Bay of.....	9 Oct., '84	F. C. Brewer	9 June, '86	100 00	7 00	.....
International Harbour, Sydney.....	30 Oct., '80	Michael Jas. Neville.....	30 Oct., '80	300 00	304 00	4 00
Isaac's Harbour.....	30 Oct., '89	Andrew J. Blakely.....	30 Oct., '89	100 00	16 00	.....
Jeddore.....	20 Sept., '90	Wm. Jennox	20 Sept., '90	100 00	Nil.	.....
Jordan Bay.....	25 Oct., '76	Matthew Drips McKenzie.....	25 Oct., '76	150 00	.....	.....
LaHave or Getson's Cove.....	12 March, '75	George Henry Zwicker.....	25 Feb., '75	300 00	30 75	.....
L'Ardoise, Upper and Lower.....	22 Aug., '84	George Burke.....	29 Aug., '84	100 00	2 00	.....
Lingan.....	12 July, '81	Thomas Laffin.....	12 July, '81	200 00	Nil.	.....
Liscombe.....	18 May, '81	David Rosenheiser.....	9 Aug., '88	200 00	Nil.	.....
Little Bras d'Or Lake, between McKay's Point and Grand Narrows.....	25 April, '84	Peter McLean	25 April, '84	100 00	.....	.....
Little Bras d'Or Lake, from McKay's Point to Washadebuck River.....	25 April, '84	Alex. J. McNeill.....	25 April, '84	100 00	.....	.....
Little Glace Bay.....	3 Aug., '74	E. Douglas Rigby.....	8 May, '84	200 00	31 50	.....
Little Narrows and Cranberry Pt.....	9 June, '83	Norman Matheson.....	23 May, '83	100 00	2 00	.....
Liverpool.....	19 Jan., '77	Wm. A. Kenny.....	19 Jan., '77	200 00	102 50	.....
Lockeport.....	18 May, '81	E. A. Capstick.....	18 May, '81	200 00	70 50	.....
Louisburg.....	17 March, '79	Louis Dickson.....	5 Oct., '87	200 00	49 50	.....
Lunenburg.....	3 Dec., '75	William Henry Begg.....	3 Dec., '75	150 00	123 00	.....
Mabou.....	17 July, '80	Finlay Rankin.....	23 June, '80	100 00	0 50	.....
Mahone Bay.....	16 May, '87	W. A. Pickles.....	16 May, '87	200 00	32 00	.....
McNair's Cove.....	12 March, '75	Ronald McEachen.....	8 March, '75	150 00	.....	.....
Main-a-Dieu.....	31 July, '86	John Farrell.....	21 July, '86	100 00	6 50	.....
Maitland.....	26 May, '85	Vacant.....	.....	100 00	.....	.....
Margaretsville.....	26 March, '78	Robert Early.....	26 March, '78	100 00	.....	.....
Margaret's Bay.....	16 July, '75	Francis Peter Boutillier.....	9 July, '75	100 00	30 50	.....
Margaree.....	12 June, '86	Julian White.....	2 Aug., '89	100 00	5 00	.....
Merigomish.....	26 March, '78	W. C. Olding.....	26 March, '78	100 00	6 50	.....

TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*PROVINCE OF NOVA SCOTIA—*Continued.*

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed	Amount collected in 1890.	Amount paid over to Receiver-General.
				£ s. cts.	£ s. cts.	£ s. cts.
Meteghan River.....	10 Feb., '83	Urbain Doucette.....	31 Jan., '83	100 00	24 50	
Mill's Harbour.....	9 June, '83	A. Hayman.....	28 May, '83	100 00	Nil.	
Musquodoboit.....	19 May, '82	David Williams.....	19 May, '82	100 00	Nil.	
Neil's Harbour.....	28 April, '76	Angus Buchanan.....	11 April, '76	100 00	Nil.	
New Haven.....	9 June, '83	Hector A. McLeod.....	17 Aug., '89	100 00		
Northport.....	27 June, '82	John M. Burns.....	27 June, '82	100 00	63 50	
Northwest Cove, Coleman's Cove and Aspetogan Harbour..	22 Dec., '76	William Murphy.....	20 Dec., '76	200 00		
Parrsboro'.....	22 Oct., '73	Edward Walter Beaty.....	22 Oct., '73	300 00	240 00	
Petite Rivière Bridge..	7 July, '83	Joseph Nelson Parks.....	27 April, '88	100 00		
Plaster Harbour.....	6 May, '74	Donald Fraser.....	6 May, '74	200 00		
Port George.....	1 May, '77	Charles B. Weaver.....	1 May, '77	150 00		
Port Greville.....	13 March, '80	Vacant.....		200 00		
Port Hawkesbury.....	16 July, '75	Daniel Henesey.....	9 July, '75	200 00	79 50	
Port Hood.....	16 July, '75	John H. Murphy, jun.....	9 July, '75	200 00	5 00	
Port la Tour.....	14 April, '81	William Nickerson.....	14 April, '81	200 00	4 50	
Port Lorne.....	27 March, '86	Samuel Beardsley.....	13 March, '86	200 00	3 00	
Port Mulgrave.....	8 March, '76	Duncan Gillis.....	23 March, '83	200 00	53 50	
Port Medway.....	25 June, '79	John W. Hutt.....	19 April, '84	200 00	40 00	
Pubnico.....	27 Sept., '82	D. Q. Amireau.....	27 Sept., '82	100 00	48 50	
Pugwash.....	22 Oct., '73	A. A. Stevens.....	22 Oct., '73	100 00	36 00	
Ritcey's Cove.....	26 Sept., '84	Joseph Ritcey.....	29 Sept., '84	100 00	60 50	
River John.....	26 March, '78	Henry Heighton.....	29 Oct., '79	100 00	3 00	
Smith's Mountain.....	28 May, '83	James McKillop.....	28 May, '83	100 00	6 00	
St. Ann's, including Fuches Cove.....	20 April, '81	Peter McLean.....	20 April, '81	200 00		
St. Mary's River.....	18 May, '81	James G. Pride.....	18 May, '81	200 00	10 00	
St. Peter's.....	24 Jan., '81	Peter McNeil.....	17 Sept., '83	200 00	83 50	
Sambro.....	27 Dec., '79	Benj. Smith, sen.....	27 May, '90	200 00	6 50	
Sheet Harbour.....	14 May, '74	Malcolm McFarlane.....	6 Dec., '83	150 00		
Shelburne.....	27 Aug., '22	John A. McGowan, jun.....	22 Jan., '80	200 00	180 50	
Ship Harbour.....	2 June, '84	Conrad Marks.....	2 June, '84	100 00	9 50	
Tatamagouche.....	27 Feb., '78	Samuel Hingley.....	18 March, '87	200 00	9 50	
Tidnish.....	5 July, '82	Charles Fields.....	30 June, '84	100 00	62 50	
Torbay and Whitehead.	18 May, '81	O. N. Feltmate.....	18 May, '81	200 00	43 00	
Tusket.....	18 March, '75	Charles W. Hatfield.....	7 March, '87	100 00	6 00	
Victoria Pier, Sydney	25 July, '84	York H. Barrington.....	25 July, '84	200 00	191 00	
Wallace.....	22 Oct., '73	Charles E. Kerr.....	28 July, '85	100 00	13 00	
West Arichat.....	20 Aug., '90	Simon Terrio.....	20 Aug., '90	100 00	Nil.	
West Bay.....	8 May, '84	John McInnis.....	8 May, '84	100 00	2 00	
West Port.....	8 March, '87	Joseph D. Payson.....	8 March, '87	200 00	18 50	
Whycocomagh.....	29 Oct., '75	Neil McKinnon.....	8 Oct., '75	100 00	7 00	
Yarmouth.....	18 March, '75	Ebenezer Scott.....	19 Oct., '77	250 00	253 00	3 00

PROVINCE OF PRINCE EDWARD ISLAND.

Alberton and Cascompec	15 July, '74	Algernon Wells.....	18 Dec., '90	200 00	12 50	
Bay Fortune.....	10 April, '75	John R. Coffin.....	29 April, '78	200 00		
Brudenell.....	25 July, '85	John A. Gordon, jun.....	25 July, '85	200 00	Nil.	
Cape Traverse.....	23 May, '84	Vacant.....		100 00		
Cardigan River, including Cardigan Bridge..	2 July, '78	Hercules McDonald.....	2 July, '78	200 00		
Cardigan River, from head of river to north bank Mitchell River..	2 July, '78	Allan Campbell.....	14 June, '83	100 00		

TABLE showing the names of Ports proclaimed under the Dominion Acts, &c.—*Con.*PROVINCE OF PRINCE EDWARD ISLAND—*Concluded.*

Name of Port.	Date of Proclamation.	Name of Harbour Master.	Date of Appointment.	Amount from the fees of office salary not to exceed	Amount collected in 1890.	Amount paid over to Receiver-General.
				\$ cts.	\$ cts.	\$ cts.
Cove Head.....	15 May, '80	James D. McMillan.....	15 May, '80	100 00	Nil.	.....
Charlottetown.....	15 July, '74	David Small.....	17 June, '74	400 00	175 00	.....
Crapaud.....	15 July, '74	Wesley Meyers.....	17 June, '74	200 00	4 00	.....
Egmont.....	15 July, '74	George Bollum.....	8 Nov., '85	200 00	.....	.....
Georgetown.....	15 July, '74	Samuel Hemphill.....	1 Dec., '87	200 00	55 00	.....
Grand River.....	10 April, '75	Ronald S. McDonald.....	10 April, '75	200 00	.....	.....
Grand River, down to and including Poplar Point and Chapel Wharf.....	10 April, '75	Vacant.....	.....	200 00	.....	.....
Hillsborough River.....	24 March, '81	Vacant.....	.....	200 00	.....	.....
Malpeque.....	10 July, '64	Alex. Thomson.....	5 April, '87	200 00	1 00	.....
Miminegash.....	17 April, '80	Richard McElroy.....	12 April, '80	100 00	.....	.....
Montague Bridge.....	15 July, '74	Daniel C. Campbell.....	17 June, '80	200 00	10 00	.....
Murray River.....	15 July, '74	Hugh McKay.....	8 May, '84	200 00	8 50	.....
Murray Harbour.....	17 June, '74	William Millar.....	17 June, '74	200 00	.....	.....
New London.....	15 July, '74	George Mackenzie.....	17 June, '74	200 00	3 50	.....
Pinette.....	15 July, '74	Vacant.....	.....	200 00	.....	.....
Port Hill.....	15 July, '74	James Ellis.....	17 June, '74	200 00	2 00	.....
Pownal.....	10 July, '79	A. A. Moore.....	10 July, '79	100 00	Nil.	.....
Rollo Bay.....	10 April, '75	Vacant.....	.....	200 00	.....	.....
Rustico.....	17 May, '75	Geo. W. McKay.....	12 April, '81	200 00	6 50	.....
St. Peter's Bay.....	10 April, '75	John McGrath.....	28 June, '87	200 00	Nil.	.....
Souris, East and West.....	10 April, '75	John McCormick.....	25 April, '79	200 00	.....	.....
Summerside.....	15 July, '74	James Grady.....	7 Nov., '87	200 00	37 50	.....
Tignish.....	22 April, '90	Ben. Gaudet.....	22 April, '90	100 00	.....	.....
Tracadie.....	17 May, '75	Donald Campbell.....	31 Jan., '81	200 00	1 50	.....
Tryon.....	12 April, '77	Alexander Howatt.....	12 April, '77	200 00	.....	.....
Vernon River Bridge.....	19 May, '74	John Finlay.....	9 Oct., '84	200 00	3 00	.....
West River.....	17 May, '75	Vacant.....	.....	.....	.....	.....

PROVINCE OF BRITISH COLUMBIA.

Nanaimo.....	10 April, '75	E. Quennell.....	24 Oct., '84	500 00	565 00	65 00
New Westminster.....	23 Jan., '80	Jas. N. Draper.....	18 Aug., '86	400 00	17 50	.....
Quadra.....	17 April, '77	Vacant.....	.....	300 00	.....	.....
Vancouver, including Burrard Inlet.....	22 Feb., '88	M. W. Thane.....	22 Feb., '88	400 00	389 50	.....
Victoria and Esquimalt.....	15 March, '75	W. R. Clarke.....	23 March, '81	600 00	310 00	.....

WM. SMITH,
Deputy Minister of Marine.

OTTAWA, 1st January, 1891.

APPENDIX No. 28.

LIST of Certificates of Competency granted to Masters and Mates, Foreign Sea-going, during the Year ended 30th November, 1890.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
						\$ cts.
	1889.					
2723	Dec. 23.	J. W. M. Hamilton.....	Mate.	St. John, N.B.	St. John.	5 00
2724	do 23.	Nelson A. Withers.	do	do	do	5 00
2725	do 23.	William H. Coonan	do	do	do	5 00
2726	do 23.	Wm. J. Davis.....	Master.....	Clifton, N.S.....	Halifax	10 00
2727	do 30.	Byron Dupree Porter.....	do	Chebogue, N.S.	Yarmouth. . . .	10 00
2728	do 30.	Amos Davison.....	Mate.	Hantsport, N.S.	Halifax	5 00
2729	do 30.	Freeman Slaweanwhite.....	do	Mahone Bay, N.S.	do	5 00
2730	do 30.	Charles Macdonald.	do	Georgetown, P.E.I.	do	5 00
2731	do 30.	Emanuel Fernandez.....	do	Brooklyn, N.S.	do	5 00
2732	do 30.	Welton Davison.	Master.....	Hantsport, N.S.	do	10 00
2733	do 30.	George Wm. McBurnie.....	do	Newport, N.S.	do	10 00
2734	1890. Jan. 18.	William King.....	Mate.....	Windsor, N.S.	do	5 00
2735	do 18.	James Dollar.....	do	Brooklyn, N.Y., U.S.	do	5 00
2736	do 18.	Johan Lundqvist.	Master.	Halifax, N.S.	do	10 00
2737	do 28.	Nehemiah Wilson	do	Barrington, N.S.	Yarmouth. . . .	10 00
2738	Feb. 13.	William Caddell...	Mate.....	Maitland, N.S.	Halifax.	5 00
2739	do 13.	Robert Hall McLeod.	do	Liverpool, N.S.	do	5 00
2740	do 20.	Robert Chesley Wells	Master	Sackville, N.B.	St. John	10 00
2741	Mar. 14.	Theodore Simpson	Second Mate	L'Islet, P.Q.	Quebec.	5 00
2742	do 14.	Victor Belanger	Master.....	do	do	5 00
2743	do 19.	John C. Amberman.	Mate.....	Granville, N.S.	Halifax	5 00
2744	do 27.	George T. Pearce	Master.....	St. John, N.B.	St. John	10 00
2745	do 27.	R. T. Morehouse.	do	Sandy Cove, N.S.	do	10 00
2746	Mar. 27.	Thomas Kyffin	Mate.....	St. John, N.B.	St. John.	5 00
2747	do 27.	David O. Doty	do	Hebron, N.S.	Yarmouth.	5 00
2748	do 27.	John McLeod	do	Montague, P.E.I.	do	5 00

LIST of Certificates of Competency granted to Masters and Mates—*Continued.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					8 cts.
2749	do 27..	Alden Patten	do	Hartford, N.S.	do	5 00
2750	do 27..	Elias Smith	do	Barrington, N.S.	do	5 00
2751	April 16..	Duncan R. McLean	do	Masstown, N.S.	Halifax.	5 00
2752	do 16..	Frederic Nelson	Master.....	Charlottetown, P.E.I....	do	10 00
2753	do 16..	Major Henry Greeno	do	Cheverie, N.S.	do	10 00
2754	do 28..	Charles R. Grant	Mate	Weymouth Bridge, N.S.	St. John	5 00
2755	do 28..	Victor Eugene Young	Master.....	Granville, N.S.	do	10 00
2756	do 28..	Albert A. Sears	do	Sackville, N.B.	do	5 00
2757	May 17..	William Leary	Mate	Stillwater, N.S.	Halifax.	5 00
2758	do 17..	Harry P. Weaver	Master.....	Middleton, N.S.	do	10 00
2759	do 27..	Michael Courtney	do	St. John, N.B.	St. John	10 00
2760	do 27..	Jonathan Rodney	do	Sandford, N.S.	Yarmouth....	10 00
2761	do 27..	David Roberts	Second Mate	Dolgelly, North Wales..	St. John	5 00
2762	do 27..	Frederick A. Smith	Master.....	Windsor, N.S.	do	10 00
2763	June 12..	James A. Hersey	Mate	Yarmouth, N.S.	Halifax.	10 00
2764	do 12..	George Smith	Master.....	Hantsport, N.S.	do	10 00
2765	do 12..	Andrew G. King	Mate	Windsor, N.S.	do	5 00
2766	do 24..	Alexander Cormier	do	Richibucto, N.B.	St. John	5 00
2767	do 24..	Albert Sockett	do	Carleton, N.B.	do	5 00
2768	do 24..	Wm. Marr Smith	Master.....	Windsor, N.S.	do	10 00
2769	do 24..	James D. Forbes	do	St. John, N.B.	do	10 00
2770	June 24..	James Adams	Master.....	St. John, N.B.	St. John	10 00
2771	do 24..	George E. Morehouse	do	Sandy Cove, N.S.	do	10 00
2772	July 2..	Henry P. Dennis	do	Rockville, N.S.	Yarmouth....	10 00
2773	do 2..	Samuel Crosby	Mate	Danvers, Mass., U.S....	do	5 00
2774	do 24..	James McNeil	Master.....	Little Glace Bay, C.B....	Halifax.	10 00
2775	do 24..	Avard Longley Starratt	do	Cambridge, N.S.	do	10 00
2776	do 24..	Percy Parker	do	Walton, N.S.	do	10 00
2777	do 24..	James C. Vickers	do	Halifax, N.S.	do	10 00
2778	do 24..	Joseph S. Shaw	do	do	do	10 00
2779	do 24..	Charles Graham	Mate	Maitland, N.S.	do	5 00
2780	do 24..	Milton T. Patterson	do	Sackville, N.B.	St. John	5 00

List of Certificates of Competency granted to Masters and Mates—*Concluded.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					\$ cts.
2781	do 24.	George W Colpitts.....	do	Pleasant Vale, Elgin, N.B.	do	5 00
2782	do 24.	Lovitt Nickerson.....	do	Wood's Harbour, N.S.	Yarmouth	5 00
2783	Aug. 8.	Robert L. Baker.....	Master.....	Yarmouth, N.S.	do	10 00
2784	do 8.	William B. Hogan.....	Mate.....	Annapolis, N.S.	do	5 00
2785	do 9.	Frank L. Davidson.....	do	Hantsport, N.S.	Halifax.....	5 00
2786	do 9.	John H. Skaling.....	Master.....	Cambridge, N.S.	do	10 00
2787	do 9.	Joseph McQuarrie.....	do	Pictou, N.S.	do	10 00
2788	do 9.	George Waters.....	do	do	do	10 00
2789	do 20.	Pleamem F. Loomer.....	Mate.....	Spencer's Island, N.S.	St. John.....	5 00
2790	do 20.	Alexander D Taylor.....	Master.....	London, Eng.	do	10 00
2791	Sept. 19.	Frederick Wm. T. Lane.....	do	St. John, N.B.	do	10 00
2792	do 19.	George W. Haines.....	do	Freeport, N.S.	do	10 00
2793	do 19.	John A. Delap.....	do	Granville, N.S.	do	10 00
2794	do 19.	Alex. McAulay.....	Mate.....	Sydney, C.B.	do	5 00
2795	do 19.	Alex. Parks	Master.....	Port George, N.S.	Halifax.....	10 00
2796	Oct. 14.	Ralph McDonald.....	do	Yarmouth, N.S.	Yarmouth.....	10 00
2797	do 9.	John E. T. How	do	do	do	10 00
2798	do 22.	John E. Curtis.....	do	Damariscotta, Me., U.S.	St. John.....	10 00
2799	do 22.	Edward G. Rouse	Mate.....	St. John, N.B.	do	5 00
2800	do 22.	George N. Purdy.....	do	Plymouth, N.S.	do	5 00
2801	do 22.	Edmund W. Eddis.....	do	Toronto, Ont.	do	5 00
2802	do 22.	Thomas A. Pineo.....	2nd Mate...	Cornwallis, N.S.	do	5 00
2803	do 22.	Frank R. B. Gardner.....	Master.....	Liverpool, N.S.	Halifax.....	10 00
2804	do 22.	George M. Dexter.....	Mate.....	Cheverie, N.S.	do	5 00
2805	Nov. 13.	John Steele.....	do	P. E. Island.....	Victoria, B.C.	5 00
2806	do 15.	Arthur S. Hatfield	Master.....	Arcadia, N.S.	Yarmouth	10 00
2807	do 15.	James L. Hemeon.....	Mate.....	Plymouth, N.S.	do	5 00
2808	do 15.	Brian Carroll.....	Master.....	Pictou, N.S.	Halifax.....	10 00
2809	do 15.	William Crossley.....	Mate.....	Windsor, N.S.	do	5 0
2810	do 20.	Anders Patterson.....	Master..	St. John, N.B.	St. John.....	10 00

LIST of Certificates of Competency granted to Masters and Mates of Inland and Coasting Vessels, for the Year ending 30th November, 1890.

Number of Certificate.	Date of Certificate	Name	Grade.	Address.	Where Examination was Passed.	Fee.
	1889.					\$ cts.
560	Dec. 24..	Wm. W. Allen.....	Master, steamer, inland.	Prescott, Ont.	Toronto	8 00
561	do 24..	Louis Lefebvre.....	Mate, steamer, inland.	Melocheville, Ont.	St. Catharines.	4 00
562	do 24..	Joseph Maisonville ...	Master, steam ferry....	Walkerville, Ont..	do ..	8 00
563	do 24..	Wm. Huckabone	do minor waters...	Pembroke, Ont....	Ottawa	8 00
564	do 24..	John A. McDonald	do freight steamer	Dresden, Ont.....	St. Catharines.	8 00
565	do 30..	Joseph Siddall	Mate, steamer, inland.	Kingston, Ont ...	Kingston.....	*
566	do 30..	Henry W. Peters	Master, sailing, inland.	do	do .....	.....
567	do 30..	Thomas N. Mackey.....	do do	do	do	8 00
568	do 30..	James Black.....	do do	Owen Sound, Ont.	Toronto	8 00
	1890.					
569	Jan. 18..	Martin Christiansen ..	Master, sailing, coast- ing.	St. John, N.B.....	St. John, N.B.	8 00
570	do 18..	Charles V. Smith.....	Master, steamer do	Victoria, B.C.....	Victoria, B.C.	8 00
571	do 28..	Harvey Cross.....	do sailing, inland.	Port Stanley, Ont.	St. Catharines	8 00
572	do 28..	Ed. Havelock Warnock.	do do coasting	Carleton, N.B. ...	St. John, N.B.	8 00
573	do 28..	Carl B. Laugbein.....	do do do	St. John, N.B....	do ..	8 00
574	do 28..	Donald Patterson.....	do steamer do	New Westminster, B.C.	Victoria, B.C.	8 00
575	do 28..	H. F. Seward	do sailing do	Victoria, B.C.	do ..	8 00
576	do 30..	Samuel J. Atkinson.....	do do inland.	Port Dalhousie, Ont.	St. Catharines.	8 00
577	do 30..	Malcolm McPhee.	Mate, steamer do	Toronto, Ont.....	Toronto	8 00
578	Feb. 13..	Dawson Ross	Master, sailing, coast- ing.	LaHave, N.S.....	Halifax, N.S..	8 00
579	do 13..	Thomas Lucas	Master, sailing, inland.	Windsor, Ont.....	St. Catharines.	8 00
580	do 13..	Edward Collis.....	do steamer, coast- ing.	Victoria, B.C.	Victoria, B.C.	8 00
581	do 20..	Herman G. Hunter.....	Master, sailing, coast- ing.	St. John, N.B....	St. John	8 00
582	do 20..	John Ed. Jeffery	do do	do	do	8 00
583	Feb. 20..	George Perreault.....	Master, sailing and steamboat, inland.	Deschambault, P.Q.	Quebec	8 00
584	Mar. 3..	John E. Willisroft	Master, sailing & freight steamer, inland.	Southampton, Ont.	St. Catharines	8 00
585	do 3..	Daniel Sutherland ...	Master, sailing, inland.	Goderich, Ont....	do ..	8 00
586	do 3..	Walter Percy.....	Master, steamer, inland	Ottawa, Ont.	Ottawa	8 00
587	do 3..	Napoléon Dussault.	do do	Deschambault, P.Q.	Quebec	8 00
588	do 3..	Joseph Blais.....	Master, sailing, coast- ing.	Berthier, P.Q.	do ..	8 00

* Paid fee at previous examination.

LIST of Certificates of Competency granted to Masters and Mates—*Continued.*

Number of Certificate.	Date of Certificate		Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.						\$ cts.
589	do	6..	Frederick W. Jordan....	Master, steamer, coast- ing.	Departure Bay, B.C.	Victoria.....	8 00
590	do	6..	Stanley Maxwell.....	Master, sailing coast- ing.	Dorchester, N. B..	St. John, N.B.	8 00
591	do	10..	Samuel Corson.....	Master, steamer, inland	Collingwood, Ont.	St. Catharines, Ont.	8 00
592	do	10..	Robert Sanderson....	do do	Revelstoke, B. C.	Victoria, B.C.	8 00
593	do	10..	Jean B. Belanger....	Master, sailing, coast- ing.	Kamouraska, P.Q.	Quebec....	8 00
594	do	10..	John Callaghan.....	do do	St. John, N. B....	St. John, N.B.	8 00
595	do	10..	Charles J. Crafford....	Master, steamer, inland	St. Catharines, Ont.	St. Catharines, Ont.	8 00
596	do	21..	George Smith.....	Master, sailing, inland.	Kincardine, Ont..	do	8 00
597	do	24..	John McCoy.....	Master, steamer, inland	Prescott, Ont....	Ottawa.....	8 00
598	do	29..	Thomas Gallagher....	Mate, sailing, inland..	St. Catharines, Ont.	St. Catharines, Ont.	4 00
599	do	29..	Frederick Hedderick...	do do	Amherstburg, Ont.	do	4 00
600	do	29..	Angus McKay.....	do do	Inverhuron, Ont..	Toronto.....	4 00
601	do	29..	Alfred Ouellette.....	do do	Lachine, P.Q.....	Ottawa.....	4 00
602	do	29..	John McGowan.....	do do	Carillon, P. Q....	do	4 00
603	do	29..	James W. Corkham....	Master, sailing, coast- ing.	Pooks Creek, N.S.	Lunenburg, N.S.	8 00
604	do	29..	Norman Saunders....	Master, steamer, inland	Collingwood, Ont..	St. Catharines,	8 00
605	Mar.	29..	John McRae.....	Master, steamer, inland	Meaford, Ont....	St. Catharines.	8 00
606	do	29..	Joseph Philip, jr....	do sailing do	Port Hope, Ont...	Toronto.....	8 00
607	do	29..	Grafton McDonald....	do steamer do	Port Lambton, Ont.	St. Catharines.	8 00
608	do	29..	John Wm. Doyle.....	do do do	Kingston, Ont....	Kingston.....	8 00
609	do	29..	Odilon Marcoux.....	do do do	St. Michel, P.Q..	Quebec....	8 00
610	do	29..	Louis James Pyette....	do do do	Owen Sound, Ont.	Toronto....	8 00
611	April	17..	John Weston.....	Master, sailing, coast- ing.	Kingston, Ont....	Halifax.....	8 00
612	do	17..	George A. White.....	do do	Canada Creek, N.S.	do	8 00
613	do	17..	Holden White.....	Master, steamer, inland	Walkerville, Ont..	St. Catharines.	8 00
614	do	17..	Frederick Johnson....	do sailing do	Midland, Ont....	do	8 00
615	do	17..	James W. Dill.....	Master, sailing, coast- ing, and mate, foreign	Avondale, N.S....	St. John, N.B.	8 00
616	do	17..	Andrew Welsh.....	Master, steamer, inland	St. Catharines, Ont.	St. Catharines.	8 00
617	do	17..	Christopher Humble....	Mate do do	Brockville, Ont..	Ottawa....	4 00
618	do	21..	James McNabb.....	Master do do	Collingwood, Ont..	Toronto.....	8 00
619	do	21..	John Coons....	Mate, sailing do	Port Dalhousie, O.	St. Catharines.	4 00
620	do	21..	John Malcolmson....	do steamer do	Hamilton, Ont....	do	4 00

LIST of Certificates of Competency granted to Masters and Mates—*Continued.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					\$ cts.
621	do 21.	Neville Harbottle.....	do do do	Toronto, Ont.....	do	4 00
622	do 21.	Chas. H. Nicholson....	Master do do	Kingston, Ont....	Ottawa....	8 00
623	do 21.	George Philip.....	Mate, sailing do	Toronto, Ont.....	St. Catharines.	4 00
624	do 21.	Joseph Tymon.....	Master, steamer, Tor- onto Bay.	do	do	8 00
625	do 21.	Raphael Barrette.....	Master, ferry steamer.	Laprairie, P.Q....	Ottawa.....	8 00
626	do 21.	David McAllister.	Master, freight steamer, inland.	Port Colborne, Ont	St. Catharines.	8 00
627	Apr. 21.	John F. Quinn.	Mate, ferry steamer, Burlington Bay.	St. Catharines, Ont	St. Catharines.	4 00
628	do 21.	Charles E. Ryan.	Mate, ferry steamer, inland.	Welland, Ont.....	do	4 00
629	May 1.	James D. McGrath.	Master, steamer, inland	Port Dalhousie, Ont.	do	8 00
630	do 1.	John A. Montgomery...	Mate, steamer, inland.	Collingwood, Ont.	do	4 00
631	do 1.	Peter Kerwin.	Mate, sailing, inland..	Sarnia, Ont.	do	4 00
632	do 1.	Omer Fortier.....	Mate, steamer, inland.	Deziel St. Lévis, Que.	Quebec... ..	4 00
633	do 1.	Bertram Bennett.....	Mate, steamer, inland.	Midland, Ont.....	St. Catharines.	4 00
634	do 2.	George Rouse	Master, sailing, coasting	St. John, N. B.	St. John.....	8 00
635	do 9.	Nelson Payzant.....	do	Lockeport, N.S....	do	8 00
636	do 9.	Chas. J. McBride.	do	Harbourville, N.S.	do	8 00
637	do 13.	Joshua D. Little.....	Mate, steamer, inland.	Washademoak, N.B.	do	4 00
638	do 20.	Patrick Kerwin.	Master, steamer and sailing, inland.	Sarnia, Ont.....	St. Catharines.	8 00
639	do 20.	William Board.....	Master, steamer, inland	Torrance, Ont.....	do	8 00
640	do 28.	George J. Guy.....	Mate, sailing, inland..	Hamilton, Ont....	do	4 00
641	do 28.	Thomas Gauley.....	Master, steamer, inland	Sault Ste. Marie, Ont.	do	8 00
642	do 28.	John McAulay... ..	Mate, steamer and sailing, inland.	Southampton, Ont.	do	4 00
643	do 28.	George T. Dunn.....	Mate, steamer, inland.	Owen Sound, Ont.	do	4 00
644	June 12.	Arthur N. McGray....	Master, sailing, coasting	Cape Sable Island, N.S.	Halifax.....	8 00
645	do 12.	Robert Hy. Harding....	do	Tusket, N.S.	St. John....	8 00
646	do 12.	Winton D. Lent.....	do	Freeport, N.S....	do	8 00
647	do 17.	Robert Ivey	Master, steamer, inland	Port Dover, Ont..	St. Catharines.	4 00
648	do 17.	Patrick Farley... ..	Mate, steamer, Toronto Bay.	Toronto, Ont.....	do	4 00
649	do 17.	George Wm. Pearson....	Master, steamer, inland	Owen Sound, Ont.	do	4 00
650	do 17.	William H. Braund....	Mate, steamer, Toronto	St. Catharines, Ont	St. Catharines.	4 00
651	do 17.	John Kelley.....	Mate, ferry steamer, inland.	Toronto, Ont....	do	4 00

LIST of Certificates of Competency granted to Masters and Mates—*Continued.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					\$ cts.
652	do 17.	Charles Gouin	Master, steamer, inland.	St. Ours, Que.....	Quebec.....	8 00
653	July 3.	Ernest Kinney.....	Master, sailing, coasting and mate, foreign	Yarmouth, N.S....	Yarmouth....	8 00
654	do 4.	James A. Thorburn....	Mate, steamer, inland.	Kincardine, Ont..	St. Catharines.	4 00
655	do 12.	Georges A. Symes....	Master, steamer, inland.	Sarnia, Ont.....	do	8 00
656	do 12.	William P. Horan.....	Mate, steamer, inland.	Prescott, Ont....	Ottawa.....	4 00
657	do 15.	John Jeffrey	do	Huntsville, Ont..	St. Catharines.	8 00
658	do 28.	Legget S. Hauselacker.	Master, sailing, coasting.	St. John, N.B....	St. John.....	8 00
659	do 28.	Andrew G. Campbell ..	Mate, steamer, inland.	Collingwood, Ont..	St. Catharines.	4 00
660	Aug. 5.	George Heather	Master, sailing, coasting.	Pugwash, N.S....	Halifax.....	.....
661	do 5.	Luther W. Norton.....	Master, sailing, coasting.	New York, U.S....	St. John.....	8 00
662	do 6.	Charles Hy. Cates	Mate, sailing, coasting.	Vancouver, B.C..	Victoria.....	4 00
663	do 6.	Frederick W. Stewart..	Master, sailing, inland.	Owen Sound, Ont.	St. Catharines.	8 00
664	do 6.	Roderick D. Campbell..	Master, sailing, coasting.	Little Glace Bay, C.B.	Sydney.....	8 00
665	do 6.	James Stewart	Mate, sailing, inland..	Owen Sound, Ont.	St. Catharines.	4 00
666	do 6.	Samuel G. Scagel.....	Mate, steamer, inland.	Sarnia, Ont.....	do	4 00
667	do 20.	Leander H. Porter.....	Mate, sailing, coasting.	Lower Granville, N.S.	St. John	4 00
668	do 20.	James M. Doyle.....	Master, steamer, coasting.	San Francisco, U.S.	Victoria.....	8 00
669	Sept. 3.	John McGrath.	Master, steamer, inland	Port Dalhousie, Ont.	St. Catharines.	8 00
670	do 3.	Andrew Rogue	do	Killarney, Ont ..	do	8 00
671	do 3.	John W. Hayley.....	do	Gravenhurst, Ont.	do	8 00
672	do 3.	Wm. M. Alderson.....	do	Port Dover, Ont..	do	8 00
673	Sept. 3.	Thomas W. Jackman....	Master, steamer, inland.	Toronto, Ont.....	St. Catharines.	.....
674	do 3.	Edward E. Whistler....	Mate, sailing, coasting.	Victoria, B.C.....	Victoria, B.C.	4 00
675	do 10.	Joseph J. Cowan.....	Master, steamer, inland.	Prescott, Ont.....	Ottawa.....	8 00
676	do 20.	Peter Poerior	Master, sailing, coasting.	Sydney, C.B....	Sydney, C.B.	8 00
677	do 20.	Clement Barkhouse..	Master, sailing, coasting.	Meaford, Ont.....	Halifax, N.S..	8 00
678	do 20.	Frank R. Churchill....	Mate, sailing, coasting.	Yarmouth, N.S....	do	4 00
679	do 26.	William E. Pitt	Master, steamer, inland.	Greenwick, N.B..	St. John, N.B.	8 00
680	do 26.	Arthur F. Hains.....	Master, sailing, coasting.	Freeport, N.S....	do	8 00
681	do 26.	George H. Cochrane....	Master, sailing, coasting.	Hope well Cape, N.B.	do	8 00
682	do 26.	Judson M. Collins.....	Master, sailing, coasting.	Advocate Harbour, N.S.	do	8 00
683	Oct. 6.	John Andrew Cates....	Mate, sailing, coasting.	Vancouver, B.C..	Victoria, B.C.	4 00

LIST of Certificates of Competency granted to Masters and Mates—*Continued.*

Number of Certificate.	Date of Certificate.	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					\$ cts.
684	do 6.	John Mowat	Mate, steamer, inland.	Toronto, Ont.	St. Catharines.	4 00
685	do 9.	John M. Croscup.	Master, sailing, coast- ing.	Bear River, N.S..	Yarmouth, N.S.	8 00
686	do 22.	Frank B. Burgess.	Mate, sailing, coasting.	Burlington, N.S..	Halifax, N.S..	4 00
687	Nov. 13.	Gilbert Johnston.....	Mate, steamer, inland.	Kingston, Ont. ...	Kingston, Ont.	4 00
688	do 13.	William Newburn	Master, steamer, in- land.	Parry Sound, Ont.	St. Catharines.	8 00
689	do 13.	Augustus Fraser.....	Master, sailing, coast- ing.	Kingston, Kent Co., N.B.	St. John, N.B.	8 00
690	do 13.	R. W. Danter	Master, steamer, in- land.	Parry Sound, Ont.	St. Catharines.	8 00
691	do 13.	Francis Scott.....	Master, steamer, in- land.	Collingwood, Ont.	do	8 00
693	do 17.	James M. Christensen...	Master, steamer, coast- ing.	Victoria, B.C. ...	Victoria, B.C.	8 00
694	do 17.	Wallace Langley.....	Mate, steamer, coast- ing.	do	do	4 00
695	do 17.	Erik Magnuson.....	Mate, sailing, coasting.	St. John, N.B....	St. John, N.B.	4 00
696	do 24.	William J. McMenemy..	Master, steamer, in- land.	Bruce Mines, Ont.	St. Catharines.	8 00
697	do 24.	George Wm. Murchison.	Master, steamer, in- land.	Toronto, Ont....	do	8 00
698	do 24.	Ralph W. Lee.....	Mate, steamer, inland.	Bracebridge, Ont..	do	4 00
699	do 24.	John Rosie.....	Master, steamer, in- land.	Owen Sound, Ont.	do	8 00
700	do 24.	Herman Matchenbacker.	Mate, steamer, inland.	Rosseau, Ont....	do	4 00
701	do 24.	Wm. S. Richmond.....	Master, steamer, in- land.	Parry Sound, Ont.	do	4 00
702	do 24.	John Campbell.....	Master, sailing, inland.	Sarnia, Ont.....	do	8 00
703	do 24.	James Morrow.....	Master, steamer, in- land.	Owen Sound, Ont.	do	8 00
704	do 24.	Achille Tremblay.....	Master, sailing, coast- ing.	Les Eboulements, P.Q.	Quebec.....	8 00
705	do 24.	Gilbert A. Arthur.....	Mate, steamer, inland.	Picton, Ont.....	St. Catharines.	4 00
706	do 29.	Ernest Cadotte.....	Mate, steamer, inland.	Midland, Ont....	do	4 00
707	do 29.	Gilbert Hy. Calway.	Master, steamer, in- land.	Parry Harbour, O.	do	8 00
708	do 29.	Wm. H. Clendinning...	Master, steamer, in- land.	Toronto, Ont.....	do	8 00
709	do 29.	Charles Martin.....	Master, steamer, in- land.	Midland, Ont....	do	8 00

LIST of Certificates of Service granted to Masters and Mates of Inland and Coasting Vessels, for the Year ending 30th November, 1890.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1889.					8 cts.
2757	Dec. 24..	James Hills	Mate, sailing, inland..	Port Hope, Ont...	Toronto ...	2 00
2758	do 30..	Porter J. Wilcox	Master, sailing, coast- ing.	Louisburg, C.B...	Halifax, N.S..	4 60
2759	do 30..	Silas F. Knowlton.....	do do ..	Advocate, N.S....	do ..	4 00
	1890.					
2760	Jan. 18..	Frederick Gough.....	do do ..	St. Martin's, N.B.	St. John, N.B.	4 00
2761	do 18..	Arthur Curry.	Mate, sailing, coasting.	Windsor, N.S....	Halifax, N.S..	2 00
2762	do 28..	Mathew Gelston.....	Master, steamer, Georgian Bay.	Meaford, Ont....	St. Catharines, Ont.	4 00
2763	do 28..	Antoine Duval	Master, steamer, Ottawa River.	Ottawa, Ont....	Ottawa.....	4 00
2764	do 28..	George Albert Glaspy..	Mate, sailing, coasting.	St. John, N.B...	St. John, N.B.	4 00
2765	do 28..	John Gundy Gidley. ...	Master, steamer, inland.	Collingwood, Ont..	St. Catharines, Ont.	6 00
2766	do 30..	George D. Wilson	Master, steamer, coast- ing.	Parrsboro', N.S...	Parrsboro', N.S.	4 00
2767	do 30..	Isaiah Robinson.....	Master, sailing, coast- ing.	Halifax, N.S.....	Halifax, N.S..	4 00
2768	Feb. 20..	William Eligh	Master, steam barge, inland.	Kemptville, Ont..	Ottawa... ..	4 00
2769	March 3..	Daniel C. McMorris....	Mate, steamer, inland.	Kamloops, B.C....	do	2 00
2770	do 3..	Thos. D. Shorts	Master, steamer, inland.	Vernon, B.C.....	Victoria, B.C.	4 00
2771	do 3..	Benjamin Terrio	Master, sailing, coast- ing.	West Arichat, N.S.	Halifax, N.S..	4 00
2772	do 3..	James Quinn.....	Master, sailing, inland.	Oakville, Ont....	St. Catharines, Ont.	4 00
2773	do 3..	Maxime Joyce.....	Master, sailing, coast- ing.	Descousse, Cape Breton.	Halifax, N.S..	4 00
2774	do 4..	Arthur Cushing	Master, steamer, Ottawa River.	Ottawa, Ont....	Ottawa.....	4 00
2775	do 6..	George A. McAloney....	Master, sailing, coast- ing.	St. John, N.B....	St. John, N.B.	4 00
2776	do 10..	James Gauley	Master, steamer, inland.	Collingwood, Ont..	St. Catharines, Ont.	4 00
2777	do 10..	Jos. Jackson Redmond..	Master, sailing, inland.	Pictou, Ont.....	Pictou, Ont...	4 00
2778	do 29..	Thos. H. Mapplebeck...	Master, sailing, coast- ing.	Victoria Harbour, N.S.	Kentville, N.S.	4 00
2779	Mar. 29..	James Llewelyn.....	Master, sailing, coast- ing.	Parrsboro', N.S...	Parrsboro', N.S.	4 00
2780	do 29..	Edward York	do do ..	do ..	do ..	4 00
2781	do 29..	Dennis J. Melanson....	do do ..	Gilbert's Cove, N.S.	Weymouth, N.S.	4 00
2782	do 29..	Joseph Bertrand.....	Mate, steamer, inland.	Ottawa, Ont....	Ottawa.....	2 00
2783	do 21..	Francis Roberts	do sailing do	St. Catharines, Ont	St. Catharines, Ont.	2 00
2784	do 21..	Francis Le Blanc.....	Master, sailing, coast- ing.	Belliveau's Cove, N.S.	Halifax, N.S..	4 00
2785	do 21..	Angus D. Richard.....	do do ..	Getson's Cove, N.S.	Lunenburg, N.S.	4 00
2786	do 21..	Peter Haga Johnson....	do do ..	Vancouver, B.C...	Victoria, B.C.	4 00

List of Certificates of Service granted to Masters and Mates—*Continued.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	When Examination was Passed.	Fee.
	1890.					\$ cts.
2787	do 21..	John Pearson.	Mate, steamer, inland.	Owen Sound, Ont.	St. Catharines, Ont.	2 00
2788	do 21..	Charles Chambers	do sailing do	Kingston, Ont. . . .	Kingston, Ont.	2 00
2789	do 21..	Joseph Michea	do do	Wolfe Island, Ont.	do	2 00
2790	do 21..	Patrick Boyle	do do	St Catharines, Ont	St. Catharines, Ont.	2 00
2791	do 21..	Lawrence Belmore . . .	Master, steamer, Lake Huron.	Southampton, Ont.	do	4 00
2792	do 21..	Angus A. McKenzie. . . .	Master, steamer, Georgian Bay.	Warton, Ont.	Ottawa.	4 00
2793	do 21..	John H. Wheaton.	Mate, sailing, coasting	Tenescape, N.S. . . .	Parrsboro', N.S.	2 00
2794	May 1..	Joseph O. Read.	Master do	Pugwash, N.S. . . .	Halifax, N.S.	4 00
2795	do 1..	John Gillis.	do do	Pictou, N.S.	Pictou, N.S. . . .	4 00
2796	do 1..	George R. McPherson . .	Master, steamer, inland.	Sarnia, Ont.	St. Catharines, Ont.	4 00
2797	do 6..	John Finnerty.	Master, steam barge, Rideau Canal.	Ottawa, Ont.	Ottawa.	4 00
2798	do 9..	James F. White.	Mate, sailing, coasting	Canada Creek, N.S	Halifax, N.S.	2 00
2799	do 9..	Albert H. Stiles.	Master do	Hopewell, N.B. . . .	do	4 00
2800	do 9..	Thomas A Northrop . . .	do steamer, inland	St. John, N.B. . . .	St. John, N.B.	4 00
2801	do 20..	Amos Sabeau.	do sailing, coasting	Port Medway, N.S	Halifax, N.S.	4 00
2802	May 28..	William Lalonde.	Master, steam tug, French River.	French River, Ont.	St. Catharines, Ont.	4 00
2803	do 28..	William Thos. Firby . . .	Master, steamer, St. Croix.	Windsor, Ont.	do . .	4 00
2804	do 28..	George Abner Morris. . . .	Master, sailing, coasting.	Advocate Harbour, N.S.	Parrsboro', NS	4 00
2805	do 28..	Robert Johnston	Mate, steamer, inland.	Hamilton, Ont. . . .	St. Catharines, Ont.	2 00
2806	June 12..	Chas. G. Cleaveland. . . .	Master, sailing, coasting.	Plympton, N.S. . . .	Weymouth, N.S.	4 00
2807	do 12..	James Durwin	do do	St. John, N.B. . . .	St. John, N.B.	4 00
2808	do 17..	Jeremiah Hurley.	Mate, sailing, inland..	Kingston, Ont. . . .	Kingston, Ont.	4 00
2809	do 17..	Richard Gawley.	Master do	Spry, Ont.	St. Catharines, Ont.	4 00
2810	do 17..	Phidelem Blouin.	do sailing, coasting.	St. Jean, Isle of Orleans, P.Q.	Quebec.	4 00
2811	July 4..	William Stalker.	do steamer, inland.	Penetanguishene, Ont.	St. Catharines, Ont.	4 00
2812	do 4..	Thomas Percy.	do do	Cardinal, Ont. . . .	Ottawa.	4 00
2813	do 4..	Eugene Ed. Jenks.	do sailing, coasting.	Parrsboro', N.S. . . .	Parrsboro', NS	4 00
2814	do 15..	Geo. N. Whattam.	do sailing, inland..	Milford, Ont.	Kingston, Ont.	4 00
2815	do 15..	Joseph Goodwin.	do steamer, inland.	Toronto, Ont.	St. Catharines, Ont.	4 00
2816	do 28..	Alfred Harris.	do do	Wallaceburg, Ont.	do	4 00
2817	do 28..	David Ostrander	Mate, sailing, inland..	Prince Edward Co, Ont.	Kingston, Ont.	2 00

LIST of Certificates of Competency granted to Masters and Mates—*Concluded.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					8 cts.
2818	Aug. 5..	Alexander Marks.	Master, steamer, inland	Dartmouth, N.S..	Halifax, N.S..	4 00
2819	do 5..	John H. Marks.	do do ..	do ..	do ..	4 00
2820	do 5..	James W. Graham.	do do ..	do ..	do ..	4 00
2821	do 5..	Leonard Moser.	Mate do ..	do ..	do ..	2 00
2822	do 5..	Levi Whitman.	do do ..	do ..	do ..	2 00
2823	do 5..	John B. Mitchell.	Master, coasting and inland.	do ..	do ..	4 00
2824	do 5..	James Murphy.	Master, sailing, coasting, and mate, foreign.	River John, N.S..	do ..	4 00
2825	Aug. 5..	Charles Reid.	Master, sailing, coasting.	Point Brulé, N.S..	Pictou, N.S..	4 00
2826	do 5..	George May.	Mate, sailing, coasting.	Dartmouth, N.S..	Halifax, N.S..	2 00
2827	do 5..	John Bengough.	Master, steamer, inland	Toronto, Ont.	St. Catharines.	4 00
2828	do 8..	Joseph F. Swain.	Master, sailing, coasting.	Cape Negro, N.S..	Halifax, N.S..	4 00
2829	do 8..	Thaddeus Sabeau.	do do ..	Port Medway, N.S.	do ..	4 00
2830	do 11..	John Rowe.	Master, steamer, inland	Trenton, Ont.	Kingston, Ont.	4 00
2831	do 11..	Alex. McRae.	do do ..	Wallaceburg, Ont.	St. Catharines, Ont.	4 00
2832	do 20..	George Heather.	Master, sailing, coasting.	Pugwash, N. S.	Pugwash, N.S.	4 00
2833	do 20..	Jacob R. Woodcock.	Master, steamer, inland	Deseronto, Ont. ..	Kingston.	4 00
2834	Sept. 3..	James Jarrell.	do do ..	Seeley's Bay, Ont.	do ..	4 00
2835	do 3..	Joseph E. Morris.	Master, sailing, coasting.	Advocate Harbour, N. S.	Parrsboro', N. S.	4 00
2836	do 3..	William Ostrander.	Master, steamer, inland	Pictou, Ont.	Kingston, Ont.	4 00
2837	do 10..	William Ed. Hays.	Master, steamer, coasting.	Canada Creek, N.S.	Parrsboro', N. S.	4 00
2838	do 13..	Francis G. Rudolf.	Master, steamer, inland	Halifax, N.S.	Halifax, N.S..	4 00
2839	do 20..	Ira Breck Folger.	Mate, steamer, inland.	Kingston, Ont.	Kingston, Ont.	2 00
2840	Oct. 6..	Owen Thomas.	Master, coasting ..	Victoria, B.C.	Victoria, B. C.	4 00
2841	do 22..	George E. Brooks.	Master, inland.	Oxendon, Ont.	St. Catharines, Ont.	4 00
2842	Nov. 13..	Wesley Nixon.	Mate, coasting.	Annapolis, N. S.	Halifax, N.S..	2 00
2843	do 17..	Robert Stanwood.	Master, coasting.	Yarmouth, N.S.	St. John, N.B.	4 00
2844	do 17..	John Ewart Hill.	do ..	Walton, N.S.	Halifax, N.S..	4 00
2845	do 24..	Lewis A. Ostrander.	Mate, inland.	Point Traverse, Ont.	Kingston, Ont.	3 00

LIST of Certificates of Competency and Service which have been cancelled or suspended during the the year 1890.

Number of Certificate.	Name.	Grade.	Cause of Cancellation or Suspension.	Date of Cancellation or Suspension.
				1889.
2349	Byron D. Porter.	Mate, competency.	Passed for higher grade.	December 23.
2456	George Wm. McBurnie	do do	do	do 23
2450	Welton Davison	do do	do	do 23
2488	Charles McDonald	2nd mate.	do	do 23
				1890.
2585	Johan Lundqvist.	Mate.	do	January 9
1785	Charles W. Porter	Master.	Drowned, 27th December, 1889, at Digby Neck, N.S.	do 9
2390	Nehemiah Wilson.	Mate.	Passed for higher grade.	do 22
2415	Robert C. Wells	do	do	Feb. 14
97	Reuben T. Morehouse.	Master, service.	do	March 13
2558	George Thos. Pearce	Mate, competency.	do	do 13
2529	Duncan R. McLean.	2nd mate do	do	April 3
2510	Frederic Nelson.	Mate do	do	do 3
2509	Major Hy. Greeno.	do do	do	do 3
2597	Victor Eugene Young.	do do	do	do 16
2598	Albert A. Sears	do do	do	do 16
2501	Andrew J. Simms.	Master do	Defaced, new one issued	do 22
589	Ingram B. Bowlby.	do do	Died at Portland, Oregon, U.S., 25th March, 1890.	May 5
905	George L. Ritchie.	do do	Suspended for six months from 22nd Jan., 1890, for neglect which led to the stranding of the "Tanjore" at Little River Head, N.B.	
2409	Henry Parker Weaver.	Mate.	Passed for higher grade.	do 9
1660	Jonathan Rodney	do	do	do 16
2505	Frederick A. Smith.	do	do	June 4
2164	George Smith.	do	do	do —
1649	Joseph Chadsey.	Master.	Died at Rio Janeiro of yellow fever, 25th March, 1890.	do 12
1417	George Marr	Master.	Died at Rio Janeiro of yellow fever, 27th March, 1890.	June 12
867	Albert Davidson	do	Died at sea on board the bark "Genoa."	do 20
2578	George Ed. Morehouse.	Mate.	Passed for higher grade.	do 20
2596	James Adams.	do	do do	do 20
2577	William M. Smith.	do	do do	do 20
2623	Ernest Kinney	do	do do	do 26
2403	Henry P. Dennis.	do	do do	do 26
2616	Joseph Smith Shaw.	do	do do	July 11
2496	James McNeil.	do	do do	do 11
2586	Avard L. Starratt.	do	do do	do 11
2593	Percy Parker.	do	do do	do 11
2661	James Chas. Vickers.	do	do do	do 11
627	James Murphy	do	do master coasting.	do 26
2662	Robert L. Baker.	do	do higher grade.	do 30
2387	Joseph McQuarrie	do	do do	do 30
2504	George Waters.	do	do do	August 2
2603	John H. Skaling.	do	do do	do 2
1872	John Alden Delap	do	do do	do 2
2131	George W. Hains.	do	do do	do 2
2442	John E. T. How	do	do do	Sept. 26
2600	Ralph McDonald.	do	do do	do 26
2633	George M. Dexter.	Second Mate.	do do	Oct. 16
2634	Frank R. B. Garden.	do do	do do	do 16
2665	John Erskine Curtis	Mate.	do do	do 16
2555	A. S. Hatfield	do	do do	do 30
2452	Brian Carrol	do	do do	Nov. 7
2579	Anders Patterson.	do	do do	do 15
2576	Stack Edgett	do	do do at Hong Kong.	do 15
2167	Herbert W. Kenneth.	do	do do do	do 15
857	Jeffrey Babin.	Master.	Died at Buenos Ayres, July, 1890.	do 15

LIST of Certificates of Competency granted to Engineers of Steamboats, for the Year
ending 30th November, 1890.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1889.					\$ cts.
972	Dec. 6..	John Alfred Rowe	Second class	Charlottetown, P.E.I....	Halifax.....	5 00
973	do 11..	Henry Lowry	Fourth class	Windsor, Ont.....	Toronto	5 00
974	do 11..	William Lindsay	do	Victoria, B.C.	Victoria, B.C.	5 00
975	do 30..	Henry Hicks.....	Second class	Valcartier Village, P.Q.	Quebec.....	5 00
	1891.					
976	Jan. 21..	Joseph Belanger.....	do	Lévis, P.Q.....	do	5 00
977	do 21..	John Jenner Booth.....	do	Chatham, Ont.....	Toronto	5 00
978	do 21..	George Brown.....	do	Point Edward, Ont.....	do	5 00
979	do 21..	John C. Kelly.....	do	Aldborough, Ont.....	do	5 00
980	do 21..	Patrick Carr, jr.....	Third class	Port Dalhousie, Ont.....	do	5 00
981	do 21..	Benjamin Tymon.....	Fourth class	Collingwood, Ont.	do	5 00
982	do 21..	David Wesley Munro.....	do	Seeley's Bay, Ont.	do	5 00
983	do 21..	George Midland Arnold...	do	Toronto	do	5 00
984	do 21..	Alfred A. Norton.....	do	Muskoka Mills, Ont.....	do	5 00
985	do 21..	John W. Taylor	do	Collingwood, Ont.	do	5 00
986	do 21..	William Lockhart	do	St. John, N.B.	St. John	5 00
987	do 21..	Thomas B. Whelpley	do	do	do	5 00
988	do 21..	Stephen Burgess.....	do	Owen Sound, Ont.	Toronto	5 00
989	do 21..	Robert Chalmers	do	do	do	5 00
990	do 28..	John McGraw	Second class ; valid in Great Britain and possessions.	Victoria, B.C.	Victoria.....	5 00
991	do 28..	John Duguid.....	Third class	Halifax, N.S.....	Halifax.....	5 00
992	Feb. 13..	Mogue Redmond	Fourth class	Kingston.....	Kingston.....	5 00
993	do 13..	Jonathan Taylor.....	Third class	do	do	5 00
994	Feb. 13..	Russel K. Nash.....	Third class	Morrisburg, Ont.....	Exchanged ...	5 00
995	do 13..	Staines Veech.....	Fourth class	Garden Island, Ont.....	Kingston ...	5 00
996	do 13..	Overton James Hickey....	Third class	Kingston, Ont.	do	5 00
997	do 13..	Thomas W. Morrison.....	do	Detroit, Mich., U.S.A.	Exchange.....	5 00
998	do 18..	Andrew J. More.....	Permit.....	South Brookfield, N.S...	Halifax, N.S.	2 60
999	Mar. 3..	William Halferty.....	Third class	Vancouver, B.C.....	Exchange.....	5 00
1000	do 3..	James Wilson.....	do	Partridge Island, St. John, N.B.	do	5 00

LIST of Certificates of Competency granted to Engineers, &c.—*Continued.*

Number of Cer- tificates.	Date.	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					\$ cts.
1001	do 21..	Hiram B. Jones	Second class..	St. John, N.B.	Quebec	5 00
1002	do 21..	William Monat	do ..	Victoria, B.C.	Victoria	5 00
1003	do 21..	Frank Goodwin.....	Fourth class..	Peterboro', Ont	Toronto	5 00
1004	do 21..	Louis Ouellett	do ..	Village Lauzon, P.Q....	Quebec	5 00
1005	do 21..	Sandford Donnelly.....	do ..	Kingston, Ont.....	Kingston.....	5 00
1006	do 21..	James W. Archibald.....	do ..	Hamilton, Ont.	Toronto	5 00
1007	do 21..	Charles N. Shaw.....	do ..	Seaforth, Ont	do	5 00
1008	do 21..	Albert Ed. House.....	do ..	Port Dalhousie, Ont....	do	5 00
1009	do 21..	George Jackson Vandusen.	do ..	Lion's Head, Bruce County, Ont.	do	5 00
1010	do 21..	George Booth.....	do ..	Kingston, Ont.....	do	5 00
1011	do 21..	James Tetro.....	do ..	do	do	5 00
1012	do 21..	John Evans.....	do ..	do	Kingston.....	5 00
1013	do 21..	Albert J. Woodward.....	do ..	do	do	5 00
1014	do 21..	James Watinan.....	do ..	Toronto	Toronto	5 00
1015	do 21..	Clark Wilbur.....	do ..	Victoria Harbour, Ont.	do	5 00
1016	do 21..	George Gagnon.....	do ..	Lévis.....	Quebec.....	5 00
1017	Mar. 21..	Archibald Cumming.....	Fourth Class..	Kingston, Ont.....	Kingston, Ont.	5 00
1018	April 11..	Joseph Arton	Third Class..	Collingwood, Ont.....	Toronto	5 00
1019	do 11..	Mathew Hy. Chisholm....	do ..	Toronto	do	5 00
1020	do 11..	John McH. Donaldson....	do ..	do	do	5 00
1021	do 11..	Oscar Humerfelt.....	do ..	do	do	5 00
1022	do 11..	Henry Parker.....	do ..	do	do	5 00
1023	do 11..	Cleophas Samson.....	do ..	Village of Bienville, P.Q.	Quebec	5 00
1024	do 11..	Elzéar Lacroix	do ..	do do ..	do	5 00
1025	do 11..	Joseph Ruel.....	do ..	Lévis, P.Q.....	do	5 00
1026	do 11..	Andrew Elliot.....	do ..	Midland, Ont.	Toronto	5 00
1027	do 28..	Alexander Campbell.....	Permit.....	Pictou, N.S.	Halifax, N.S..	2 00
1028	do 28..	George Hy. Shutliff.....	do	Gananoque, Ont	Kingston, Ont.	2 00
1029	May 10..	Chas. G. C Simpson.....	First Class, valid in Great Britain and possessions.	Montreal	Montreal.....	5 00
1030	do 10..	Gavin Hamilton, Ont.....	First Class..	Quebec	Quebec.....	5 00
1031	do 10..	Lucien Marchand.....	Second Class..	Montreal.....	Montreal.....	5 00

LIST of Certificates of Competency granted to Engineers, &c.—*Continued.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1890.					\$ cts.
1032	do 10..	George Gendron.....	Fourth Class..	do	do	5 00
1033	do 10..	Richard Toupin	do ..	Champlain, P.Q.....	do	5 00
1034	do 10..	William Charlton... ..	do ..	Toronto	Toronto	5 00
1035	do 10..	John A. C. Scagel.....	do ..	Sarnia, Ont.....	Sarnia, Ont....	5 00
1036	do 10..	Joseph Hamelin.....	do ..	Village of Lauzon, P.Q..	Quebec.	5 00
1037	do 10..	Elisha T. McGuire.....	Third Class...	Vancouver, B.C.....	Victoria.....	5 00
1038	do 10..	Jacob F. Walter.....	do ..	do	do	5 00
1039	May 10..	Desire Maratte.....	do	Village Bienville, Que...	Lévis.....	5 00
1040	do 10..	Alphonse Coiret.....	do	St. Joseph de Lévis, Que.	Quebec.	5 00
1041	do 10..	James A. Dwyer.....	do	Wisawasa, Ont.....	Montreal.....	5 00
1042	do 10..	William A. Robertson...	do	Halifax, N.S.....	Halifax.....	5 00
1043	do 10..	Martin Luther Crandell...	Permit.	Port Perry, Ont.....	Kingston.....	2 00
1044	June 16..	Norman Neff.....	do	Humberstone, Ont.....	Toronto	2 00
1045	do 16..	Arthur Thomas Lowe.....	do ..	Port Carling, Ont.....	do	2 00
1046	do 16..	Edward Abbey.....	do	Toronto	do	2 00
1047	do 16..	David B. Hayes.....	Third Class...	St. John, N. B.....	Exchange	5 00
1048	do 28..	John Senecal.....	Permit.	Grenadier Island, Ont...	Kingston.....	2 00
1049	do 28..	S. R. Heenan.....	do ..	Cardinal, Ont.....	do	2 00
1050	July 2..	George M. Bucher.....	do ..	Brockville, Ont.....	Toronto	2 00
1051	do 15..	John D. Hoey.....	do ..	Toronto.....	do ..	2 00
1052	Aug. 2..	Fredk. Sayers Henning...	Third Class...	do .....	.....	.....
1053	do 2..	Jerome Young.....	Permit.	Peterboro.....	Kingston.	2 00
1054	do 2..	Napoleon Brebeau.....	do	Brockville, Ont.....	do	2 00
1055	do 2..	Charles Graveles.....	do ..	Bridgeworth, Ont.....	do	2 00
1056	do 13..	Duncan Cameron.. ..	Fourth Class..	Halifax, N.S.....	Halifax	5 00
1057	do 13..	Matthew Hayes.....	do	Toronto.....	Toronto	5 00
1058	do 13..	John Kearns.....	do ..	Point Edward, Ont.	do	5 00
1059	do 13..	Leonard G. Holder.....	do	Yarmouth, N.S.....	Yarmouth	5 00
1060	do 13..	Ernest Wyman.....	do	do	do	5 00
1061	do 13..	Alexander Bertram.....	do ..	Victoria, B.C	Victoria.....	5 00
1062	do 13..	William S. Turner.....	do	Point Edward, Ont.	Toronto.....	5 00
1063	do 13..	Henry Clay Prichard.....	do ..	Toronto.....	do	5 00

LIST of Certificates of Competency granted to Engineers—*Concluded.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1890.					\$ cts.
1064	do 13..	George Lawson.....	do	Montreal.	Montreal.....	.....
1065	do 13..	Xavier Hamelin.....	Second Class..	Village Bienville, Que...	Quebec.....	5 00
1066	do 13..	James N. Dick	do	Quebec	do	5 00
1067	do 13..	Robert L. Fraser.	Third Class...	New Westminster.....	Victoria.	5 00
1068	do 14..	Matthew Hayes.....	Permit.	Toronto	Toronto	2 00
1069	do 14..	Thomas Hy. Sheffield.....	do	Sutton West, Ont.	do	2 00
1070	do 14..	William Powles.....	do	Tyendinaga, Ont.	Kingston.	2 00
1071	do 14..	Samuel Emerson.....	Third Class...	Fort Chipewyan, Ont....	Exchange.....	5 00
1072	do 22..	Clement Montville.	Permit.....	Thurso, Que... ..	Montreal.....	2 00
1073	Sept. 2..	Gilbert S. H. Sproatt.	Second Class, valid in Great Britain and possessions.	Victoria, B.C.....	Victoria	5 00
1074	do 19..	Francois Gendrois, jr.....	Third Class...	Sorel, Que.....	Exchange .....	.....
1075	do 19..	William Lewis Armstrong.	do	Ottawa.....	do	5 00
1076	do 19..	Thomas O'Marra.....	Permit.	Lombardy, Ont.....	Smith's Falls.	2 00
1077	Nov. 29..	George Dick.....	Third Class...	Chatham, N.B.....	Exchange	5 00

APPENDIX No. 29.

OFFICE BOARD OF TRADE,
10 ST. JOHN STREET AND 39 ST. SACRAMENT STREET,
MONTREAL, 6th January, 1891.

The Honourable CHAS. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour, by direction of the Council of this Board, and in compliance with section 31 of the Act governing the Port Warden's office, 45 Vic., chap. 45, to transmit herewith documents as follows:—

1. The Port Warden's report for the year 1890.
2. Audited statement of receipts and expenditure of the Port Warden's office for year ended 31st December, 1890.
3. Statement of investments of the Port Warden's surplus funds.

I have the honour to be, Sir,

Your obedient servant,

GEO. HADRILL,

Secretary.

OFFICE OF THE PORT WARDEN,
MONTREAL, 31st December, 1890.

The President and Council of the Board of Trade,
Montreal.

GENTLEMEN,—I have the honour to submit the annual report of this office, with statements of its receipts and expenditures for the year 1890.

The season of ocean navigation opened on the 30th April with the arrival in port of the steamships "Oregon" "Sardinian" and "Lake Nipigon". These were closely followed by other steamers, and on the 26th May the first sail vessel the barque "Sophie of Wilhelmine", from Buenos Ayres, arrived. The SS. "Gerona" passed inwards through the Straits of Belle Isle on the 16th June, the first of this season's fleet to do so, and reported large quantities of ice. The SS. "Brazilian" sailed on the 24th November being the last sea-going vessel to leave port.

Three hundred and sixty-three vessels have entered this year at this office, being one vessel more than the entries of 1889, when the tonnage amounted to 612,004 tons; this season there has been a decrease of twenty-four sail vessels, but an increase of twenty-five steamers and 40,204 tons, making the total tonnage 652,208. The increased size of vessels frequenting this port is no doubt owing to the greater depth of water in the improved ship channel.

It is satisfactory to state that no casualties have occurred to vessels in our trade between Quebec and Montreal, nor have any vessels been reported as missing or lost by overloading from this port this season, and no damage has been received by any of our fleet by ice, large quantities of which, both field and berg, have been reported in the routes of vessels coming to the St. Lawrence River.

There has been a considerable decrease in some of our usual articles of export, there being a shortage of 883,757 bushels of grain 117,589 sacks flour, 1,316 tons phosphates—the total shipment of these being: grain, 9,075,529 bushels; flour sacks, 543,948; phosphates, 22,532 tons. In other articles there has been a very considerable increase, lumber being 8,275,735 feet; apples, 21,583 brls.; minerals, 2,305 tons—the total shipments, 162,565,353 feet of lumber, 182,263 brls. apples, 4,197 tons minerals. The dead meat business, which had ceased since 1886, has been again taken up, 1,538 tons being shipped this season.

The increase in the export of cattle and horses is very marked; there have been 119,321 animals shipped, against 85,629 head in 1889, an increase of 33,632 head. The sheep have, however, decreased from 58,683 to 42,741, a falling off in numbers of 15,942.

In consequence of a continuance of very tempestuous weather during the later months of this season large losses have occurred in the cattle carrying trade; but according to statistics issued by those interested, the percentage of loss has been small in comparison to the immense shipments made, and compares favourably with any other cattle shipping port. In view, however, of the trade being most valuable to the whole Dominion of Canada, it would be well were a proper system of inspection instituted as to the capabilities of vessels to carry cattle.

There have been 23 time-chartered steamers employed in the coal trade between the lower port mines and this port; these, with 21 transient steamers, have brought here 413,000 tons of coal, an increase of 100,304 tons over the season 1889.

In conducting the office, the work of which is yearly becoming more arduous, on account of the increased size of the vessels, greater tonnage and more extended area of the port, I have been ably and efficiently assisted by my staff, and it is again satisfactory to state that no complaints against the proper working of the "Port Warden Act" have been laid before you this season.

I am, Gentlemen,
Your obedient servant,
JAS. G. SHAW,
Port Warden.

STATEMENT of the Investments of the Surplus Funds of the Port Warden's Office at Montreal, and of Interest Accruing therefrom, during the Year ended 31st December, 1890.

Date.	Investments.	Amount.	Interest.
			\$ cts.
Jan. 12, 1877..	Expended \$2,044 in purchase of City of Montreal Corporation Bonds, Nos. 00423, 00424, 00425, 00426, 4, at \$500.	\$2,000 00, at 6 p.c. for 12 mos.	120 00
Feb. 16, 1880..	Expended \$2,380.34 in purchase of Dominion Government Stock	2,300 00, at 4 do ..	92 00
Aug. 16, 1880..	Expended \$7,254.11 in purchase of City of Montreal Registered Stock	7,000 00, at 5 do ..	350 00
April 18, 1884..	Expended \$5,031.34 in purchase of City of Montreal 4 per cent. Registered Stock, Nos. 1720, 1721, 1722, 1723, 1724—5, at \$1,000	5,000 00, at 4 do ..	200 00
Mar. 14, 1887..	Expended \$10,320.75 in purchase of City of Montreal Consolidated Fund Stock, Class C—100 shares of \$100 each	10,000 00, at 4 do ..	400 00
Nov. 2, 1888..	Deposited in the Merchants Bank of Canada, \$10,000 on Deposit Receipt No. 13981, at 4 per cent.	10,000 00	
	Temporary loan to Board of Trade Building Fund, consisting of \$5,000 previously on Deposit Receipt in Merchants Bank, together with accrued interest thereon to 15th Oct., 1890, \$155.62; and interest on \$10,000, now on Deposit Receipt in Merchants Bank, to 30th Oct., 1890, \$327.68.	5,483 30	
	Total of Surplus Fund	\$41,783 30 Interest, 1890..	1,162 00

EDGAR JUDGE,
Treasurer.
GEO. HADRILL,
Secretary.

OFFICE BOARD OF TRADE,
MONTREAL, 6th January, 1891.

PORT WARDEN'S OFFICE.
STATEMENT of Receipts and Expenditure for Year ending 31st December, 1890.

Dr.

Cr.

Date.	RECEIPTS.	Amount. \$ cts.	Total. \$ cts.	Date.	EXPENDITURE.	Amount. \$ cts.	Total. \$ cts.
1889, Dec. 31..	To Balance cash in bank,.....	5,006 06	5,148 98	1890, Dec. 31..	By paid salaries, &c.—		
1890, Dec. 31..	do in Port Warden's hands,.....	142 92			Jas. G. Shaw, Port Warden.....	2,000 00	
	Receipts derived as under—				Geo. W. Morrison, Deputy Port Warden.....	1,500 00	
	2,191,544 bushels wheat.....				W. J. Anderson, book-keeper.....	1,200 00	
	1,344,372 do pease.....				E. J. Hunt, clerk.....	340 00	
	5,096,510 do corn.....				A. E. Brown, boy.....	70 00	
	230,688 do rye.....				Board of Trade secretarial expenses.....	1,000 00	
	212,415 do oats.....				Port Warden's superannuation allowance—		
	959 tons oil cake.....				Jas. G. Shaw, Port Warden.....	300 00	
	4,197 do minerals.....				Geo. W. Morrison, Deputy Port Warden.....	200 00	
	543,948 barrels flour and meal.....	407 82			Rent, fuel, taxes, light, insurance, &c.....	437 60	
	1,670 do ashes.....	16 70			Maritime Register, Lloyds' Register, &c.....	70 85	
	182,263 do apples.....	455 68			Books, printing and stationery.....	68 25	
	119,321 oxen and horses.....	1,193 21			Cab-hire.....	110 45	
	42,741 sheep.....	106 91			Miscellaneous expenses.....	25 10	
	162,565,353 feet lumber.....	812 84			Office furniture.....	56 88	
	91,739 tons sundries, at 3c.....	2,752 17			Alf. W. Hadrill, auditor.....	60 00	7,439 13
	6,572 do do 2c.....	131 44			Balance cash in bank.....	7,240 99	
	22,532 do phosphates.....	225 32			do Port Warden's lands.....	166 40	7,407 39
	Port Warden's fees (inwards).....	210 00					
	do (outwards).....	1,405 50					
	Special surveys.....	462 00					
	Damaged cargo certificates.....	218 50	8,398 09				
	Interest on deposit in Montreal City and District Savings Bank.....	137 45					
	Interest on investments for 1890.....	1,162 00					
1891, Jan. 1..	Balance.....		1,299 45				14,846 52
			14,846 52				
			7,407 39				

Audited and found correct.

ALF. W. HADRILL, Auditor.

MONTREAL, 5th January, 1891.

E. & O. E.

JAS. G. SHAW,
Port Warden.

APPENDIX No. 30.

PORT WARDEN'S OFFICE,

QUEBEC, 31st December, 1890.

The Honourable CHAS. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

SIR,—As required by the 30th section of the Port Warden rules, I beg respectfully to submit the following annual statement of the business transacted in the office during the year ending this day, the 31st December, 1890, as follows:—

Seven steamers and 12 sailing vessels had their hatches and cargo surveyed, by the request of the captain or agent, on their arrival from sea.

Fifty-five steamships were surveyed for clearance outwards, after taking on board part cargo at this port, having previously loaded part cargo of grain and other goods at Montreal. Vessels not carrying grain do not come under the Port Warden rules, and therefore are not included in the above list.

Five steamers and 6 sailings vessels were surveyed, on account of damage by stranding, collision or otherwise.

Two steamers and 2 sailing vessels were surveyed for valuation.

Three sailing vessels were surveyed for sea-worthiness.

Nineteen surveys were held on different lots of damaged cargo and material.

The receipts and expenditure of the office were:—

Receipts from all sources.....	\$842 00
Expenses of office.. .. .	422 00
	<hr/>
Balance, net revenue	\$420 00
	<hr/>

The vessels which sustained the most serious damage by stranding or otherwise were as follows:—

SS. "Sicilian" stranded while coming out of Sydney Harbour, C.B.; proceeded to Montreal and returned to Quebec for repairs; was placed in dock and temporarily repaired; then took in a cargo of timber and proceeded to England.

SS. "Norse King" was damaged by ice while on a voyage from Europe to Montreal with a general cargo; proceeded to her destination; discharged and returned to Quebec; was placed in dock and permanently repaired under Lloyd's survey, in accordance with their rules; she then went to Montreal, took in a general cargo and proceeded to England.

SS. "Canopus," while on a voyage from Great Britain to Montreal with a general cargo stranded, on the Percé Rock at Rivière du Loup, where she lay from 14th to 21st May. Most of the cargo was discharged there; she was then floated and brought to Quebec. The graving dock being occupied, she was placed on the beach and temporarily repaired, but the Port Warden's certificate was withheld, as she could not be properly examined; she afterwards proceeded to England with a cargo of deals.

SS. "Thornholme" stranded at Rivière du Loup while proceeding from Pictou, N.S., with a cargo of coal; she was floated and brought to Quebec, and is now in Mr. G. T. Davie's dock undergoing permanent repairs under Lloyd's survey.

SS. "Barcelona," while on a voyage from Middleboro to Quebec, with a cargo of rails and other iron, stranded on Red Island; was brought to Quebec and is now in the graving dock waiting further orders.

SS. "Oregon" stranded while entering the harbour; she proceeded to Montreal, discharged her cargo, returned to Quebec, was placed in dock and temporarily repaired; she then went to Montreal, took in a general cargo and proceeded to England.

Brigantine "Plymouth" stranded at the Richelieu while proceeding from Montreal to St. John's, Nfd., with a cargo of grain and hay; she came to Quebec, was placed in Mr. John Roache's dock, and repaired; re-shipped her cargo and proceeded.

Bark "Isabel" was cut in two and sunk by SS. "Lake Nipigon," while moored at her wharf discharging cargo of molasses; she was afterwards condemned and sold.

Bark "Magnificent" sustained slight damage by collision while coming out of her loading berth in the harbour; was temporarily repaired and proceeded.

The schooner "Audacious" was damaged by collision.

The schooner "Marie Elmere" stranded at Les Eboulements while proceeding from Montreal to St. John's, Nfd., with provisions; she returned to this Port, made temporary repairs and proceeded.

The whole respectfully submitted.

I have the honour to be, Sir,

Your obedient servant,

W. SIMONS,

Port Warden.

APPENDIX No. 31.

PORT WARDEN'S OFFICE,
HALIFAX, N.S., 31st December, 1890.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I have the honour to submit my report for the year ending 31st December, 1890, accompanied by a statement of the receipts and expenditure during that period.

Surveys have been held by me on eleven steamers and twenty-two sailing vessels, which arrived in a damaged condition during the year. The vessels were properly repaired, and those of them bound to other ports with their cargoes have all arrived safely at their destination.

Eleven steamers bound to Great Britain loaded grain as a portion of their cargoes during the year. The total amount of grain shipped was 22,143 bushels of wheat, 211,523 bushels of oats and 259,821 bushels of pease.

No irregularities in connection with the office have occurred during the year.

I have the honour to be, Sir,

Your most obedient servant,

DAVID HUNTER,
Port Warden.

RECEIPTS and Expenditure of the Port Warden, Halifax, N.S., from 1st January to
Dr. 31st December, 1890. Cr.

	\$ cts.		\$ cts.
To amount of fees received.....	2,330 22	By paid assistants, office expenses, &c....	1,262 96
		Amount reverting to Port Warden....	1,067 26
	2,330 22		2,330 22

I hereby certify that the above is a true and correct statement of the receipts and expenditure of the Port Warden at Halifax, N.S., during the year 1890.

DAVID HUNTER,
Port Warden.

HALIFAX, N. S., 31st December, 1890.

APPENDIX No. 32.

REPORT OF THE PORT WARDEN FOR PORT HAWKESBURY, N.S., FOR
THE CALENDAR YEAR ENDED 31st DECEMBER, 1890.

PORT HAWKESBURY, 31st December, 1890.

SIR,—I have the honour to submit my annual report of the doings of this office, accompanied by a statement of the fees collected by me and also the attendant expenses during the past year.

Enclosed please find a list of vessels arriving here in a damaging condition on which surveys have been held by me in the year now ended. The damaged vessels have all been repaired and went on to their ports of destination, except the schooner "Nettie M. G.," she remains here until spring, will then make repairs.

I have the honour to be, Sir,

Your most obedient servant,

D. W. HENESEY,
Warden.

WILLIAM SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

STATEMENT of Receipts and Expenditure paid to Shipmasters and Shipwrights for
Year 1890.

Year.		Amount paid Shipmasters	Amount paid Shipwrights
1890.		\$ cts.	\$ cts.
April.....	1 survey on schooner "Condor," damaged by wharf.....	8 00	.....
May.....	2 surveys held on schooner "Amos B.".....	13 00	.....
October...	2 do do do "Maggie Fander".....	27 00	16 00
	2 do do do "Vigilante".....	18 00	5 00
November	2 do do do "Florence C.".....	28 00	16 00
	1 survey on schooner "Olive J." of Halifax.....	18 00	10 00
	2 surveys on "Katie," of Halifax.....	33 00	20 00
December.	1 survey on hull and cargo of schooner "Euphrosyne".....	18 00	10 00
	1 do schooner "Annie Gabz" of Halifax.....	18 00	10 00
	2 surveys do do "Nettie M. G.".....	23 00	10 00
	Total.....	204 00	97 00
		97 00	
	Amount reverting to Port Warden.....	107 00	

I do hereby certify that the above is correct to the best of my knowledge.

D. W. HENESEY,
Warden.

PORT HAWKESBURY, 31st December, 1890.

APPENDIX No. 33.

Pictou, N.S., 31st December, 1890.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I have the honour to herewith submit this my annual report as Port Warden of this port for the year ending this date :—

Amount of fees received for surveys.....	\$128 50
Paid fees to assistants.....	30 00
Net revenue.....	<u>\$98 50</u>

Respectfully submitted,
DANIEL McDONALD,
Port Warden.

Sworn before me, at Pictou, this 31st }
day of December, A.D. 1890. }
WM. McLAREN, J.P.

APPENDIX No. 34.

PORT WARDEN'S OFFICE,
NORTH SYDNEY, C.B., 20th January 1891.

SIR,—I have the honour to report as follows :—

During the past season I have held the following surveys—

Sailing ships	12
Steamships.....	3
	<u>15</u>

All the above surveys were held on vessels which had stranded or received other damage, and which were repaired at this port.

The fees received were.....	\$204
Office and other expenses.....	40
	<u>244</u>
Net fees received....	<u>\$164</u>

I have the honour to be, Sir,

Your obedient servant,

DANIEL McKAY,
Port Warden.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

APPENDIX No. 35

REPORT OF THE PORT WARDEN FOR THE PORT OF SYDNEY, C.B.,
FOR THE YEAR ENDING 31st DECEMBER, 1890.PORT WARDEN'S OFFICE,
SYDNEY, C.B., 31st December, 1890.

SIR,—I have the honour to submit a report of the transactions in connection with the office of Port Warden at Sydney, C.B., ending the past year.

I have the honour to be, Sir,

Your obedient servant,

JOHN LOWRAY,
Port Warden.

The Honourable CHAS. H. TUPPER,
Minister of Marine and Fisheries,
Ottawa.

RECEIPTS and Expenditure of the Port Warden, Sydney, Cape Breton, from 31st
December, 1889 to 1890.

CR.	\$ cts.	DR.	\$ cts.
For surveys on steamers for bunker coals entered in my office	256 00	By Fees paid to assistants	62 00
Surveys on two steamers	30 00	Office rent and stationery	40 00
do two schooners	40 00		102 00
	326 00	Amount reverting to Port Warden . . .	224 00
			326 00

I hereby certify that the above is a true and correct statement.

JOHN LOWRAY,
Port Warden.

SYDNEY, C.B., 31st December, 1890.

APPENDIX No. 36.

REPORT OF THE PORT WARDEN FOR THE PORT OF YARMOUTH, N.S., FOR THE YEAR ENDING 31st DECEMBER, 1890.

YARMOUHH, N.S., 1st January, 1891.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I now have the honour to submit my report as Port Warden for the port of Yarmouth, N.S., for the calendar year ended 31st December, 1890.

I have been called on twelve times to hold surveys on wrecks.

The amount of fees from these surveys was..... \$155 00

I paid out from that amount for assistance..... 75 00

Leaving a balance for my services..... \$80 00

I have the honour to be, Sir,

Your obedient servant,

EBENEZER SCOTT,

Port Warden.

I, Ebenezer Scott, of Yarmouth, declare that the above account is just and true, and I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the Act respecting extra-judicial oaths.

Declared before me, at Yarmouth, this }
2nd day of January, 1891. }

EBENEZER SCOTT.

W. V. BROWN, *J. P.*

APPENDIX No. 37.

REPORT OF THE PORT WARDEN FOR THE PORT OF ST. ANDREWS, N.B.,
FOR THE YEAR ENDING 31ST DECEMBER, 1890.

St. Andrews, N.B., 31st December, 1890.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I have the honour of inclosing you the Port Warden's report for the year 1890. All those vessels' cargoes were phosphate, and turned out in good order, with the exception of the schooner "Spring Bird," having been on shore. A few barrels on the ground tier were damaged, but all the damage was settled satisfactory between the captain and the consignee.

I have the honour to be, Sir,
Your obedient servant,
JOHN WREN,
Port Warden.

Port Warden's Report for the Port of St. Andrews, ending December, 1890.

Date.				\$ cts.
Jan. 2. . .	Survey on hatches, Schooner	Welcome Home.		2 50
do 3. . . .	do do	H. G. King.		2 50
do 5. . . .	do do	Aurora Borealis.		2 50
do 16. . . .	do do	Ernest T. Lee		2 50
Feb. 7. . . .	do do	William Demming		2 50
do 14. . . .	do do	Spring Bird.		2 50
do 15. . . .	do cargo do	do		2 00
do 17. . . .	do average do	do		8 00
Mar. 6. . . .	do hatches do	Leading Breeze.		2 50
do 22. . . .	do do do	Sabina.		2 50
do 22. . . .	do collision do	Caroline Miller.		5 00
April 17. . .	do hatches do	Luganno		2 50
do 18. . . .	do cargo do	do		2 00
				39 50

Sworn to at St. Andrew's, N.B., }
1st January, 1891, before me. }
JOHN S. MAYOR,
Justice of the Peace.

JOHN WREN,
Port Warden.

APPENDIX No. 38.

REPORT OF THE PORT WARDEN FOR THE PORT OF CHARLOTTETOWN,
P.E.I., FOR THE YEAR ENDING 31ST DECEMBER, 1890.

PORT WARDEN'S OFFICE.

CHARLOTTETOWN, P.E.I., 31st December, 1890.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I have the honour to submit my annual report of the business of my office during the past season.

I regret to say that we have had an unusual early close of navigation and severe gales, causing much damage to shipping, which prevented more produce being shipped from the Island this season.

The British barque "Cariboo" left this port on the 3rd of this month for Bermuda, John Walsh master, with a general cargo, and when off the Wood Islands met with a south-east wind, and put back, and came to anchor in Hillsborough Bay; and on the morning of the 5th parted her chains in a heavy north-west gale, and was driven ashore at Point Prim, but with the assistance of the steam tugs was taken off and towed into Charlottetown harbour, making water, and will remain here for the winter.

I have the honour to be, Sir,

Your obedient servant,

H. P. WELSH,
Port Warden.

RECEIPTS and Expenditure of the Port Warden's Office, Charlottetown, P.E.I., for
the Year ending 31st December, 1890.

DR.	\$ cts.	CR.	\$ cts.
To Fees derived from grain-laden vessels.	140 00	By Expenses of office.....	11 50
Damaged goods.....	74 00	Commission to deputies.....	72 00
Survey on hatches.....	21 00	Balance.....	179 50
Other surveys.....	28 00		
	263 00		263 00

I hereby certify that the above is a correct statement.

H. P. WELSH,
Port Warden.

APPENDIX No. 39.

REPORT OF THE PORT WARDEN OF VANCOUVER, B.C., FOR THE YEAR
ENDING 31ST DECEMBER, 1890.

On 12th January I was called to survey the SS. "Danube" Capt. Hill, from Portland, Oregon. I found that the hatches were properly covered and protected with tarpaulins. I also found that the vessel had sustained some damage by shipping of heavy seas on crossing Columbia Bar, carrying away forward house, and staving in officers' rooms, and starting the funnel ventilation, thereby allowing salt water to get at cargo and damage same. I found that every precaution had been taken to stop the leak, and consider the whole damage was caused by stress of weather on the passage to this port.....

\$16 00

Jan. 10.—Surveyed hatches of SS. "Parthia," from Japan,
in good order..... 10 00

Feb. 10.—Surveyed hatches of SS. "Batavia," from
Japan, in good order..... 10 00

Feb. 28.—Surveyed SS. "Rustler," on beach, leaking.... 5 00

do 28.—Called survey SS. "Batavia," cargo damaged
by salt water, caused by starting of the ven-
tilator on starboard side forward of No. 2
hatch, allowing water in the hold; the
damage was caused by shipping heavy seas
on the voyage to this port, and I consider
the vessel not liable..... 16 00

April 3.—Surveyed hatches SS. "Parthia," from Japan,
in good order..... 10 00

April 4.—Steamer "Clyde" a shore; called Capt.
McPhaiden and G. Fraser to assist; vessel
ordered to be repaired.... 10 00

May 3.—Surveyed hatches SS. "Batavia," from Japan,
in good order..... 10 00

May 22.—Surveyed hatches SS. "Abyssinia," from
Japan, in good order 10 00

June 11.—Surveyed hatches SS. "Parthia," from Japan,
in good order..... 10 00

July 10.—Surveyed hatches barque "Mercator," from
London, in good order..... 10 00

July 21.—Surveyed hatches SS. "Batavia," from Japan,
in good order. 10 00

Aug. 4.—Surveyed hatches SS. "Straits of Belle Isle,"
from Japan, in good order..... 10 00

Aug. 5.—Called to survey damage to cargo now landing
from SS. "Straits of Belle Isle." I find
considerable damage has been caused by
sweating, breaking, and chafing, by heavy
rolling of the ship on the passage to this
port, the deck being continually washed by
seas, not allowing the opportunity to open
hatches to give sufficient ventilation to avoid
sweating. I find the cargo was carefully
stowed, and dunnaged, and consider the
vessel not liable 16 00

- Aug. 7.—Survey of wreck of SS. "Etta White." That being called by Capt. H. Smith, of the stranded steamer "Etta White," to proceed to Thormanby Island, Gulf of Georgia, the place of the wreck of said steamer "Etta White," and ascertain the position of said vessel, and as to whether she could be saved. We left Vancouver Tuesday evening, 5th inst., and arrived at Fattenham Ledge the following morning, the scene of the wreck. Capt. Smith pointed out as near as possible the place where his vessel had stranded; we sounded the reef, and found the depth of water to correspond with that laid down on the chart, but could not locate the rock on which Capt. Smith says his vessel struck, the least depth of water being $2\frac{1}{2}$ fathoms. Capt. Smith says there was little over a foot of water over the rock on which his vessel struck, as the scow which he had in tow also grounded on it. We continued sounding for two hours, when the breeze sprang up and raised a heavy sea on the reef, which prevented our continuing the search. We found the water deepening on both sides of the reef, and have no doubt that the vessel slipped into deep water, probably from 10 to 30 fathoms, and we consider the vessel a total loss, and recommended the captain to notify his owner to that effect..... 16 00

M. W. THAIN, *Port Warden.*

CAPT. J. NEWBY, *Master Mariner.*

GEO. A. FRAZER,

Agent and Surveyor Veritas.

- Aug. 9.—Surveyed hatches SS. "Abyssinia," from Japan, all in good order..... 10 00
- Aug. 21.—Surveyed hatches SS. "Parthia," from Japan, all in good order..... 10 00
- Sept. 11.—Surveyed scow with cargo hay (damaged) for Capt. Couth 5 00
- Sept. 17.—Surveyed hatches SS. "Sussex," from Japan, all in good order..... 10 00
- Sept. 18.—Surveyed hatches SS. "Mongkut," from Japan, all in good order..... 10 00
- Sept. 20.—Surveyed hatches SS. "Batavia," from Japan, all in good order..... 10 00
- Sept. 24.—Survey of SS. "Mongkut." I was called to survey damage to cargo on SS. "Mongkut," voyage first from Yokahama to Vancouver, and I find that considerable damage has been caused by breakage and sweating. The damage was done during a severe storm on 8th inst., and four following days, when the ship had to be turned back to westward; and a very heavy sea running caused the ship to roll heavily, thereby causing the

	breakage, and the hatches to be kept closed, causing sweatage; and I consider the ship not liable, and advise the cargo to be sent to its destination, so as to avoid any further loss to all parties concerned.....	16 00
Oct. 25.—	Surveyed hatches of SS. "Straits of Belle Isle," from Japan, and found them properly covered but upon opening them found that cargo had sweated.....	10 00
Oct. 25.—	I was called to survey damaged cargo on board SS. "Straits of Belle Isle." I find that considerable of the cargo has been damaged by sweating, caused by want of ventilation, which could not be avoided, on account of the severe weather encountered on the passage to this port, the hatches having to be kept closed on account of so much water on deck, also some damage by breakage, caused by the heavy rolling of the ship during the storm, which lasted three days; and I consider the ship not liable, as the ship was properly stowed and dunnaged....	16 00
Oct. 28.—	Surveyed hatches of SS. "Abyssinia," from Japan, all in good order.....	10 00
Nov. 8.—	Surveyed hatches of SS. "Parthia," from Japan, all in good order.....	10 50
Dec. 19.—	Surveyed hatches of SS. "Batavia," from Japan, all in good order.....	10 00
Dec. 18.—	I held a survey of damage to cargo on SS. "Batavia" from Japan. I find that in Nos. 2 and 3 hatches the cargo has been damaged by sweatage and leakage from the deck, caused by the straining of the ship during the passage to this port. In No. 1 hatch the cargo has been badly broken, the sulphur being packed in cases not strong enough to carry in good order; the breakage has been caused by the heavy rolling of the ship, the ship having had a very boisterous and rough trip. I consider the ship not liable, as every care had been taken in the storage and dunnage of the cargo.....	16 00
		312 00
	Less office rent, 12 months, at \$6 per month....	72 00
		\$240 00

Sworn before me this 31st day }
of December, A.D. 1890. }

M. W. THAIN,
Port Warden.

HENRY V. EDMUNDS, J.P.

 APPENDIX No. 40.

 REPORT OF THE PORT WARDEN FOR THE PORTS OF VICTORIA AND
 ESQUIMALT, FOR THE YEAR ENDED 31ST DECEMBER 1890.

VICTORIA, B.C., 3rd January, 1891.

 WM. SMITH, Esq.,
 Deputy Minister of Marine,
 Ottawa.

SIR,—I have the honour herewith to enclose the annual returns from the Port Warden for the harbours of Victoria and Esquimalt, for the year ending the 31st December, 1890.

I have the honour to be, Sir,
 Your obedient servant,
 W. R. CLARKE,
Port Warden.

 PORT WARDEN'S RETURNS FOR THE YEAR ENDED 31ST OF
 DECEMBER, 1890.

VICTORIA, B.C., 3rd January, 1891.

Survey of hatches.....	\$ 40 00
Surveys on cargoes.....	125 00
Total.....	<u>\$ 165 00</u>

W. R. CLARKE,
Port Warden for the Harbours of Victoria and Esquimalt.

 WM. SMITH, Esq.,
 Deputy Minister of Marine,
 Ottawa.

APPENDIX No. 41.

REPORT OF THE HARBOUR COMMISSIONERS OF PICTOU, N. S.

PICTOU, N. S., 20th March, 1891.

WM. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

SIR,—I herewith enclose you account of Harbour Commissioners for Port of Pictou, for year 1890; also supplementary accounts from the late Secretary. I regret the delay in sending the accounts. I also enclose you report of Harbour Master.

Yours truly,
D. SUTHERLAND,
Secretary.

RECEIPTS and Expenditures for 1890.

DR.	\$ cts.	CR.	\$ cts.
1890.		1890.	
Jan. 31 To Balance on hand as per state- ment	2,860 72	Feb. 24 By Paid Andrew Munro, labour	3 75
May 13 To Cash from Acadia Coal Co. for logs	19 04	S.S. "Egerton"	2 50
Oct. 22 To Cash from Barque "Hanna" for wharfage per Messrs. Noo- nan & Davies	32 00	R. Dunbar for bushes	4 00
To Interest	143 03	Labour on buoys	4 05
		Bushing E. River acct. I. Munro	11 25
		do do I. Hue	17 00
		do M. River acct. J. McRae	8 00
		do W. do R. McKay	8 00
		Labour, Abercrombie wharf	98 21
		Stone for do	35 75
		T. Robley, repairing ballast wharf	7 50
		Labour, market wharf	6 00
		Coopering buoys	0 30
		Cartage chain	0 30
		Bushing E. River	4 00
		A. Munro, ballast from	3 52
		A. A. Garvin, deals, \$10.42; labour, \$6	16 42
		J. T. Paulin, hire lighter for stone	12 00
		W. Carson per acct.	5 19
		A. McKaracher per acct.	18 87
		Tug "Daisy" per acct.	60 00
		Dawson Gordon acct. cartage ..	79 10
		D. McDonald, B. S., balance account	55 05
		Secretary's salary	100 00
		5 per cent. commission, 460.76 ..	23 04
	3,054 79	By Balance	2,470 99
1891.			
Jan. 31 To Balance	2,470 99		3,054 79

J. A. GORDON.

PICTOU, 31st January, 1891.

REPORT OF HARBOUR COMMISSIONERS AT PORT OF PICTOU FOR
THE YEAR ENDING 31st DECEMBER, 1890.

1890.	\$	cts.	\$	cts.
Dec. 31.—To Paid repairs wharf, New Glasgow.....	172	83		
do Alex. Garvin, wharfinger.....	74	11		
do Geo. Fraser, labour at wharf.....	11	00		
do Harbour police.....	150	00		
do James Breenan, truckage.....	16	85		
do Repairing crane	50	50		
do S.S. "Egerton".....	3	00		
Balance.....	72	76		
			550	55
CONTRA.				
By amount of Harbour Dues for 1890, after deducting \$400, amount by Collector of Customs to Harbour Master.....			550	55
Dec. 31.—By Balance on hand.....	72	76		
LIABILITIES.				
Due wharfinger.	100	00		

ALLAN A. FERGUSON,
Chairman.
D. SUTHERLAND,
Secretary.

Sworn before me,
WILLIAM ROSS, J. P. }

We have made several demands on the late Secretary for the balance of moneys in his hands belonging to the Harbour Commission, but as yet have not received any satisfaction.
A. A. F.,
D. S.

Pictou, 31st December, 1890.

Sir,—I have the honour to report that the following vessels have entered the harbour of Pictou during the year ending this date:—

Vessels.	Number.	Tons.
<i>British.</i>		
Paddle steamers.....	203	135,226
Screw steamers.....	137	40,335
Barques	9	5,280
Brigantines.....	3	482
Schooners	1,161	54,396
<i>Foreign.</i>	1,513	235,719
Steamers.....	23	19,532
Sailing.....	13	4,740
	1,549	259,991

ALLAN FERGUSON, Esq.,
Chairman Harbour Commissioners, Port of Pictou.
JOHN GUNN,
Harbour Master.
282

MEMORANDUM of Receipts and Disbursements of Harbour Dues, at the Port of
Pictou, N. S., during the Year ending December 31st, 1890.

1890.	RECEIPTS.	\$	cts.	\$	cts.
Jan. 1.—Balance on hand from 1889.....		200	00		
Dec. 31.—Harbour Dues collected during 1890.....		884	88		
				1,084	88
	DISBURSEMENTS.				
April 28.—Cash paid for blank book.....		1	00		
Dec. 31.—Paid Harbour Master's salary, 1890 (paid monthly).....		400	00		
do do Harbour Commissioners during 1890.....		550	55		
do Amount deposited in bank, reserved to pay Harbour Master's salary, 1st January to 30th April, 1891.....		133	33		
Dec. 31.—To balance in bank.....		133	33		
				1,084	88

D. McDONALD,
Collector.

PICTOU, N. S., 31st, December 1890.

DOMINION OF CANADA.

EVIDENCE

ON THE

EXPORT CATTLE TRADE OF CANADA,

TAKEN AT

MONTREAL, QUEBEC AND THREE RIVERS,

BEFORE

MR. WILLIAM SMITH,

Deputy Minister of Marine of Canada.

PRINTED BY ORDER OF PARLIAMENT.



PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1891.

To the Honourable

CHARLES H. TUPPER,

Minister of Marine and Fisheries.

SIR,—In compliance with your instructions I herewith submit a report of the evidence on the Export Cattle Trade of Canada, taken before me at Montreal, Quebec and Three Rivers.

All of which is respectfully submitted.

WM. SMITH,

Deputy Minister of Marine.

OTTAWA, 9th February, 1891.

In the matter of the Enquiry into the Cattle Live Stock Export Trade of Canada and the Evidence in connection therewith taken before Mr. William Smith, Deputy Minister of Marine of Canada.

I, Thomas P. Owens, one of the official Reporters of the House of Commons of Canada, do solemnly declare that I took down in shorthand the evidence of the witnesses examined at Montreal and Quebec, before Mr. William Smith, Deputy Minister of Marine, a Commissioner appointed to enquire into the Live Stock Export Trade of Canada; and that appended is a true and faithful transcript into ordinary writing of the evidence of each witness, so taken by me.

And I make this solemn declaration, conscientiously believing the same to be true; and by virtue of the "Act respecting extra-Judicial oaths."

And I have signed,

THOMAS P. OWENS.

Declared before me at Ottawa, this }
10th day of February, A.D. 1891. }

W. E. HODGINS,

A Commissioner and Notary Public.

ENQUIRY INTO THE CATTLE EXPORT TRADE

BETWEEN

THE DOMINION OF CANADA AND GREAT BRITAIN.

MONTREAL, 5th January, 1891.

Mr. William Smith, Deputy Minister of Marine, under instructions from the Minister of Marine, opened an enquiry at Montreal, on the 5th day of January, 1891, to take evidence relative to the export trade in live cattle between Canada and Great Britain.

The enquiry was held in the Board Room of the Harbour Commissioners of Montreal. It was attended by a large number of those engaged in exporting cattle from Canada, by representatives of the shipowners and steamship agents, by representatives from the Marine Underwriters Association, by persons employed to take charge of cattle on the voyage across the Atlantic, and by others interested in the trade and commerce of Montreal.

Mr. Bulmer, Chairman of the Harbour Commissioners, Montreal, represented that body;

Mr. Greenshields, Q.C., appeared to represent the Dominion Live Stock Association; and

Mr. James Allan, advocate, represented the Allan Steamship Company.

Appended is the evidence of the several witnesses taken during the course of the enquiry at Montreal.

Mr. William Smith, Deputy Minister of Marine, the Commissioner for the enquiry in opening the proceedings, said:—

GENTLEMEN,—You are, I presume, all aware of the object of my present visit to Montreal. There has been considerable discussion in England and in Canada on the subject of the cattle export trade from this continent, and this discussion has been principally caused by a Bill introduced—or rather promoted—by Mr. Plimsoll in the British Parliament, one of the objects of which would seem to be a prohibition against the carrying to Great Britain of live cattle from this country, or, in fact, from any country west of the 12th parallel of west longitude, which would include all this Dominion.

The Bill to which I have referred contains three leading provisions. One of the clauses refers to the building of vessels with bulkheads, but in this matter we in Canada are not interested, as we have not yet arrived at the stage of being extensively engaged in iron ship-building. That provision will only be of interest in the Old Country, where the vessels to which it refers are built. The second provision of the Bill is with reference to the carrying of deck loads of timber or sawn wood during the winter months. This provision may, to a small extent, affect some persons interested in the shipping of lumber and who reside in this city; but it has special interest in some parts of the Lower Provinces, where they are in the habit of taking limited deck cargoes of timber in the winter months.

In 1873 a Bill was passed in this country limiting the deck load of sawn lumber to 3 feet. So far as my experience goes, that law has been found to work very well, and since the deck cargo was limited to 3 feet we have had no complaints as to the danger of carrying deck loads during the winter months.

It appears, however, that Mr. Plimsoll, who is the promoter of the Bill now before the English Parliament, thought differently. He thought that there should be no deck loads of timber, or lumber—at all events during the winter months; and in his Bill he places a clause by which the operation of the Imperial law at present would be repealed in this particular.

I have never heard any complaints about the danger of carrying this limited deck load, and I believe very few accidents have happened to vessels after the 1st of October in each year which have carried the 3 feet deck load. Since the passing of that law in 1873 we have been able to ascertain of very few accidents, drowning or otherwise.

The third provision of the Bill now before the Imperial Parliament is the one in which we are particularly concerned to-day, and the section of it to which I refer reads as follows:—

“Live cattle shall not, after the 1st day of January, 1891, be landed at any port of the United Kingdom from any ship, whether British or foreign, from any port or place west of the 12th parallel of west longitude. Any cattle so landed in contravention of this section shall be forfeited to Her Majesty, and may be seized and detained by any officer of Customs or Board of Trade. The Board of Trade may from time to time make regulations exempting from this section any description of cattle not imported for the purpose of sale for food.”

You will notice that there is no power given under this Bill to the Imperial Board of Trade or to any other authority to supervise or superintend the loading of the cattle, or to ascertain the seaworthiness of the ship for the purpose of carrying cattle. It provides, however, that certain descriptions of cattle might, from time to time, be exempted from the prohibition by the Imperial Board of Trade regulations, and that, I take it, only refers to cattle imported into England for stock purposes. For instance, cattle for breeding might be admitted into Great Britain by certain regulations of the Imperial Board of Trade. There does not appear to be any provision in the Bill exempting from this prohibition the class of cattle shipped to Great Britain from Canada, viz., the stock cattle, which are taken to the old country and sold to the farmers there, and having been grazed and fed by the English and Scotch farmers are re-sold as fat cattle for the purposes of food. There is no doubt about it that if this Bill becomes law no live cattle, such as now are shipped to a large extent, can be carried from this country to Great Britain.

Mr. JOHN POPHAM, Marine Underwriter.—Was that Bill introduced into the English House of Commons?

Mr. SMITH.—Yes.

Mr. POPHAM.—By whom?

Mr. SMITH.—By a number of gentlemen, including Messrs. Howell, William Abraham, Broadhurst, Burt, Cremer, Fenwick, Pickard and Rowland, members of the Imperial House of Commons. I may mention to you that I understand from correspondence we have had that the Bill was, however, promoted by Mr. Plimsoll.

Evidently when the Bill was drafted it was intended to cover the class of animals known as fat cattle, which are being shipped in great quantities from Canada to England, and no exemptions are made by it in favour of the Canadian trade either in fat cattle or “stockers.”

I am told that out of 120,000 cattled exported from Montreal last season about 75,000 head were not fit for killing when they arrived, but were sold to the English and Scotch farmers, fattened by them and re-sold to the butchers.

I have a friend, Colonel Innes, of Aberdeen who has taken a great interest in the matter of importing stock cattle into Scotland, and who has promoted a company for that purpose.

I have had some communication with Colonel Innes, and while he entertains a great many humanitarian views, similar to Mr. Plimsoll, yet he thinks it would be a great injury both to the farmers of his part of the country, and, as he rightly supposes, injury to the farmers of Canada as well, to prohibit the exportation of live cattle from Canada.

If the class known as stock cattle were exempted from the provisions of this Bill, the question would narrow itself down to the issue, viz., is it advisable to prohibit the importation into England of live cattle fit for killing? Is it advisable to allow or sanction a measure to become law which would prohibit this trade?

We know that in the United States they ship only fat cattle to England, because they are obliged to kill their cattle within ten days after arrival there. The provisions of this Bill would not affect the United States very much, because the law, as at present, provides that they have to kill their cattle when they are landed in England, and it would not, I suppose, make very much difference to the United States exporters if they were compelled to kill the animals on this side and send over the meat in the frozen state. It is, however, very different in the case of Canada, where we can get our live cattle into England.

The Bill is general in its scope. It includes Canada as well as the United States. Before the Bill was allowed to pass the British Parliament it was found to be of such concern to a great many important interests that the Imperial Government thought it advisable and necessary to have its provisions enquired into.

They knew very well that in a matter so much affecting our trade here Canada should be consulted, and they very wisely, I think, decided to refer the Bill to a Inter-Departmental Committee, consisting of representatives of the Board of Trade and the Board of Agriculture of Great Britain. That committee is presided over by the Hon. Mr. Chaplin, who is Minister of Agriculture and a member of the British Government. The Imperial Government, through the Colonial Office, communicated with the Government of Canada, with the view of ascertaining their views on the different questions involved in the Bill.

The Canadian Government thought it advisable that persons immediately interested in these great industries referred to in the Bill should be heard and their views ascertained. In order to facilitate this, I have been directed to come here to give each person interested an opportunity of expressing his views, without the trouble and inconvenience of leaving his home and place of business. If any gentleman has any recommendations to make or views to offer I will be glad to hear him. These views will be taken down by an official stenographer, and, when collected, will be forwarded by the Canadian Government to the British Colonial Office, for the information of the committee now sitting in London, so that any one who gives evidence here will have his opinions presented before this committee as if he were examined in London.

We will now proceed with the enquiry, and I will remain here until every person who wishes to give evidence on the subject has been heard.

JOHN McLENNAN, President of the Beaver Line Steamship Company, of the City of Montreal, was the first witness to present himself before the Enquiry at Montreal. He said:—

Mr. Commissioner, before you proceed to take evidence in this matter, I should like to make a statement on behalf of the steamship lines which have done the bulk of the business in this cattle-carrying trade. I wish, therefore, with your permission, to make a brief and general statement before you proceed to take special evidence. I am speaking now for the five steamship agencies in Montreal who have conducted the greater part of the cattle-carrying business, viz., the Allan Line, the Dominion Line, the Beaver Line and the agencies represented by Mr. Munderloh and Mr. Reford. In order to make no mistake about it, I will take the liberty of reading a statement which I have prepared, so that there will be no time lost:

Ever since the first small beginning of cattle shipment the importance of the trade has been recognized by the owners of steamships, and with its growth the fact became apparent that the first condition of success and permanence was safety. Without any control by legislation the managers in the port of Montreal, of the regular lines, have succeeded, by care and judgment in loading, in the treatment of the cattle on board, as well as the equipment and ventilation, and in the navigation of vessels, in keeping down the losses to the small proportion given in the statements that are

submitted. To show the care at sea, that has much to do with the attainment of these results, I may read from the log of the "Lake Winnipeg," which left port on the 7th November last with a large cargo of cattle. It is as follows:—

"November 15th.—Three hours kept before the sea to ease cattle. November 16th.—Five hours kept before the sea to ease cattle. November 17th.—Kept away before the sea nine hours to ease cattle."

This record is in regular course of the master's duty, and so reported to the owners of the steamer. The agents of the Dominion Line have not preserved the statements, but they can be had from Liverpool. Mr. Munderloh will submit a statement for the German lines.

These figures, which I append, show the loss on the two lines that have given long and close attention to the trade to have been about one animal out of 266 carried, and if the methods under consideration have the effect of bringing the general average of loss to something near the same rate there can exist no pretence of reason for suppressing shipments from the St. Lawrence. The proposal to establish, by legislation, a system of inspection of all vessels carrying cattle, and requirements as to fixtures and space and ventilation, has our hearty approval and assistance, and in connection with the manner of carrying on this desirable improvement I may, perhaps, be allowed to recall the fact that several years ago serious loss of life and property having followed the improper manner of loading ships in Montreal, the matter was taken up by the Board of Trade and an Act of Parliament obtained establishing the office of port warden, and under control of that officer the business of loading ships with grain and lumber and other cargo has been carried on without serious complaint. I think I am justified in making, on the part of the steamship owners, the suggestion that equally good results may be expected if the proposed regulations in regard to shipment of cattle are placed under the same control, and on the same line as to appointments, so far as this port is concerned. It has been suggested that "stockers" only might be continued to be shipped—that is, that the farmer might sell his half-grown or half-fed stock, but not his best—or not for the best market. This is a proposal so hostile to the great industry of which the Government that you represent is the guardian, and so contrary to every principle of economy, that it is hard to account for its being made. The carriers are not aware of any justification for it.

By Mr. Smith :

Q. The figures which you have given, and which will be published in the evidence, are those connected with the regular line of steamships?—A. Yes; they are all for the regular lines. I think it will be found that the number of cattle carried outside of this have been comparatively small.

Q. Does that include transient vessels which are running for regular lines?

MR. ANDREW ALLAN.—The figures which state that only one animal has been lost out of 266 only applies to two lines—the Allan and the Beaver.

Q. I see by your statement that you approve of the system of Government inspection for all vessels carrying cattle?—A. Yes; certainly.

Q. I suppose that inspection would be something similar to the inspection of grain-carrying vessels?—A. Yes; something similar. Of course, the carrying of grain is quite another matter.

Q. You recollect about the loss of grain-carrying vessels, when several vessels were lost which sailed out of Canadian ports?—A. Yes; I recollect that, and I have referred to the matter in my address.

Q. I suppose that your suggestion would be that the Government would make a general act for the Dominion and attach it to the Port Warden's Act for Montreal—an Act of this kind must be general in its provisions?—A. Yes; I will leave that matter entirely to the Government.

Q. Have you any views to give as to the kind of inspection that would be feasible or necessary—have you thought over that point?—A. Yes; I think I can very readily state the general views of the shipowners in that respect, because it is one that has already been considered by those who have taken a lead in this trade. Of course, in

the first place there is the important fact that all ships carrying cattle or any other goods should be well appointed in their hulls and machinery, and in every respect generally well fitted to qualify them for the business of carrying life and property across the Atlantic. In the next place, with respect to the cattle ships which carry large numbers of cattle, we have taken a great deal of pains to ascertain the best means of ventilating them in the best manner possible. We have taken pains to adopt measures so as to avoid the danger of suffocating cattle when it becomes necessary to close down the hatches in heavy weather, and generally to provide the animals with fresh air. We have been careful to adopt the best means of carrying the cattle in respect to room where they are placed, and the stalls within which they are confined, and to afford access to them by the cattle-men in charge, so as to give them feed and water. I think the results that I have stated in respect to the small loss of the two lines that have taken a leading part in this business, show that we have taken these precautions and adopted these means with considerable success. We naturally think that these are the grounds upon which inspection should prevail. There is a question which will come up more particularly when the shippers of cattle come to give their evidence, and that is with regard to the care of the animals on board ship. From our point of view there is room for improvement in the care of the animals on board. There is room for improvement in the class of men who are put on board to take charge of them, in regard to their fitness for that particular work. We think this might be improved. As far as our own men are concerned, the extract which I have read from the log of the "Lake Winnipeg" conveys an idea of the care that is taken of the cattle by the captains and officers of our ships. I may say that all our officers and men are instructed to take the best care of the animals, and it goes without saying that any man who is accustomed to this work will find that the greatest care and the greatest humanity with which he can handle the animals will accomplish the best results for himself and for the owners, as well in the great cause of humanity as for monetary considerations. The cause of humanity seems to be the moving power in one portion of this enquiry. I think that every means is being now taken to care for the animals, and with the improvements which I have suggested they will be well provided for on their journey to England. I do not think that there is anything else that I can say specially on this question, but I daresay Mr. Allan and Mr. Reford can perhaps add something new, or corroborate my statement. I have been on the wharf occasionally when cattle have been shipped, and I have seen no greater cruelty to the animals than I have seen when animals have been turned into their own stables. I think the process of shipping cattle and putting them into their own stables is very much the same, and I am quite sure that so far as the owners and managers of the steamship lines are concerned, every care is taken that there should be no unnecessary cruelty to the animals.

Q. Do you think that any time should be specified by legislation or Government regulations as to the season of the year that cattle should be carried across the Atlantic? Have you any idea as to whether their shipment should be stopped in the fall and winter months, or do you think that the shipment of cattle to England should not be restricted, and that shippers should have the privilege of shipping them whenever they liked?—A. The figures that I have given you show that there is very little danger in shipping cattle at all times of the year.

Q. I would like to get a direct answer, as to whether you consider it advisable to make any provision in the regulations which will have to be made, or in the legislation which will be passed on the subject, to limit the time of shipping cattle on the upper deck of vessels crossing the Atlantic. Do you think there should be any prohibition of carrying animals on the upper deck in winter?—A. I may say, as a categorical answer, that I do not think there should be any limitation.

Q. You think that no limitation should be made, and that cattle should be allowed to be carried any time of the year on the upper deck?—A. Yes; I consider that they should be allowed to be carried at any time of the year from the St. Lawrence.

Q. I am speaking particularly with reference to the trade from the St. Lawrence?—A. The St. Lawrence itself establishes prohibition on that point by freezing up in winter. I should say that cattle should be shipped on the upper deck at any time during the continuance of navigation.

Q. You think that cattle should be allowed to be taken in the month of November on the upper deck in these temporary houses, which are constructed on the steamships?—A. I think so, but under proper control of course.

Q. And if they are allowed to build houses on the upper deck in November there should be control? There should be some inspection as to how the houses are built?—A. Yes; certainly, there might be that inspection. What I mean is, that the inspection should be sufficient, and that cattle should be allowed at all times on the upper deck.

Q. You think, then, that cattle should be carried in houses fitted up on the upper deck?—A. Yes; I believe there is little or no danger to them on the upper deck. Take the evidence of the parties who have been more directly concerned in handling them and it will go to establish that fact.

Q. Of course, these houses are not permanent erections—they are temporary houses?—A. Yes; they are temporary houses.

Q. You have no opinion to give as to what special regulations should be made with regard to this trade?—A. Nothing more than what I have said. I cannot say anything as to the details of these regulations, but I imagine that these will be fixed by the Government.

Q. You speak, of course, only as representing the owners of the regular lines of steamers?—A. I speak only of the regular lines.

Q. What is your opinion as to whether the cattle men should go as passengers or should sign the ship's articles and come under the control of the captains—have you any opinion to offer as to that?—A. That is a very difficult question, and as a steamship owner I should not like to give a decision upon it.

Q. Of course, you can say you have no opinion on the matter?—A. I have no opinion on it.

Q. You do not wish to give any opinion on that?—A. Not beyond what I have stated, that the care of the cattle might be improved, if better men were selected to look after them on the voyage. This question, however, is a special part of the business. Whether the cattle men should go as passengers in the vessel, as many of them do now I believe, or whether they should sign the articles, in which case they would be under the control of the captains, who could compel them to do their work I am not at the moment prepared to give an opinion, because I think the matter involves other questions of responsibility. It is altogether too long a subject to go into.

Q. I am here for the purpose, and I will wait six months if necessary, in order that the fullest evidence may be given at this enquiry?—A. The question in such a case would be, whether by putting these men on the ship's articles to take care of the cattle, would the ship become responsible for the cattle, and whether it would not be practically insuring the cattle. I think this question is involved in connection with this particular subject, and would have to be carefully considered. For that reason I am not quite prepared to go into it.

Q. Have you any opinion to give as to the space that should be allowed to the cattle on board ship?—A. My opinions are only second hand on that point.

Q. Have you any opinion in reference to the steam fans for providing ventilation for the cattle, so that those animals under deck in heavy weather, when the hatches are covered down, could be provided with fresh air, just the same as those on the upper deck?—A. I have a very decided opinion that there should be steam fans on cattle steamers. The Beaver Line have supplied them on every one of its ships, and I think the Allan Line has done so also.

Mr. ANDREW ALLAN.—Yes.

Q. You have already supplied steam fans on each vessel?—A. Yes; I think steam fans should be on every vessel that carries cattle.

Q. You think that it should be provided by regulation that steam fans should be carried on every cattle vessel?—A. Yes; most decidedly.

Q. Do you know of many vessels supplied with steam fans?—A. I do not know of any others except our own line and the Allan Line. The steam fans are carried on some of Mr. Reford's vessels, I think.

Mr. MUNDERLOH, Agent for the Hansa Line of steamships.—They are carried on the vessels which I represent also.

Q. (To Mr. Reford). Are all the vessels on your line supplied with steam fans?—A. No, sir; I think only two of them.

Q. Are the transient vessels provided with steam fans?—A. I do not know from my own knowledge. But they have a system of ventilators, and also "up-take" ventilators.

Q. (To Mr. McLennan) You have facilities for condensing water for the use of the animals on board your ships?—A. Yes.

Q. In all your boats?—A. Yes.

Q. You carry cattle on the upper deck, of course?—A. Yes.

Q. Do you have angle-iron frames, or just merely wooden frames, for building the houses on?—A. We have iron frames on the spar deck. One of our officers, Mr. Campbell, can answer for that.

Q.—Have you them in all the vessels of your line?

Mr. CAMPBELL.—Except on the "Lake Ontario."

Q. (To Mr. McLennan) Have you any opinion about the size of vessels that should be allowed to carry cattle—have you any idea as to what the size of the vessels should be limited to? Do you think that vessels of less than 1,200 or 1,500 tons should be excluded?—A. I think that small vessels can carry cattle just as well as large vessels, but I have no opinion on that point. I think it is our experience in connection with our line—that the smaller vessels have carried the cattle with as much safety as the larger ones.

Q. How small is the smallest vessel on your line?—A. She is a net tonnage of 1,437 tons, and 2,200 tons gross register. That vessel is the "Lake Nipigon."

Q. And she has carried cattle just as well as the large vessels?—A. Her record is much the same as the others.

Q. Did she carry cattle during the winter months also?

Mr. CAMPBELL.—Yes; the winter before last she carried cattle from Norfolk.

Mr. McLENNAN.—Her record is just as good as the other vessels. I may say in this connection that my opinion is that the quality and the fitness of the vessels for the trade are the important points.

By Mr. Smith :

Q. What is the general cause of the mortality that takes places among cattle crossing the ocean?—A. As far as my opinion goes, a very large portion of the deaths take place going down the St. Lawrence.

Q. That is on account of the excessive heat in summer?—A. Yes; it is because the cattle are overheated. Beyond that, serious loss of cattle on the open sea has occurred in very few cases, and that only during extraordinary storms at sea.

Q. Do you know if the cattle are allowed enough room on board ship to lie down?—A. That I cannot tell you. The men who handle them on board ship can give you better information on that point than I can. Mr. Lee, who has fitted up our vessels with cattle stalls, and who has seen the animals on board, can give you information on that point.

Q. Do you know if there are any efforts made to keep cattle standing up on the vessels during the voyage?—A. I can only tell you from what I have seen myself in crossing two or three times. I never crossed in heavy weather, when there would be any difficulty in handling the cattle on board.

Q. Had they room to lie down?—A. I have seen them lying down, certainly, but whether they could all lie down at the one time or not I cannot say.

Q. Have you ever heard of animals having been thrown overboard in a storm?
—A. No; I cannot speak as to that.

Q. Have you ever seen inefficient men in charge of cattle?—A. I should say that some of them were inefficient.

Q. Do you think that would have any effect on the losses?—A. Yes; I should say it would have some effect on the losses.

Q. Is there enough room provided for the cattle to lie down on the voyage across the Atlantic?—A. Yes; there is enough room on the regular liners.

Q. Can they all lie down at once?—A. There is ample room for all of them to lie down.

Q. And there are no efforts made by the cattle men to make them stand up during the voyage?—A. I have never seen or heard of any until I heard of the statements in Mr. Plimsoll's book. There would be no object in making the animals stand up.

Q. You were speaking of the regular liners?—A. I have only experience on the regular liners.

Q. Can you tell us anything as to the space allowed for each animal?—A. I have never measured the space. I am not familiar with that.

Q. You never knew anything about throwing cattle overboard—live cattle—in a storm?—A. I never heard of such a thing.

Q. In the details about fitting up stalls and space for the cattle you have no experience—you have nothing to say as to what space should be allowed for each fat animal and as to how many "stockers" should be put in the place of four fat cattle?—A. I know nothing directly about this question. I am only acquainted with the general business, and I have no experience in details, as I never measured the shipments.

Q. As to the different questions relating to the number of cattle men, the condition of the cattle and the description of the men, you have no experience of that either, have you?—A. No; I have known about the class of men that take care of the cattle, because I have crossed in vessels and have seen men on board who were there for that purpose and who were very inefficient. It has been said that people often apply for the position of cattle men in order to get a free passage across. They have no experience in the care of cattle, and sometimes when they get to sea they are quite incapacitated from taking care of the animals on account of their being sea-sick.

Q. It has been said that all descriptions of men, such as politicians, clergymen, doctors, members of Parliament—though not, I believe, of the Canadian Parliament—have gone over in charge of cattle. Have you any experience as to that?—A. I have no experience in regard to that, but I have noticed men who are very inefficient for their work.

Q. They apparently had no experience?—A. Yes; they apparently had no experience. There might be clergymen, and members of Parliament, and very clever ones, for anything I know; but if they were, some of them certainly did not know how to take care of cattle.

Q. Do you think the employment of inexperienced cattle men has anything to do with the loss of cattle?—A. Yes; I should think it has, but I cannot fix the measure of the effect it has on the losses. It is quite apparent that it must have some effect.

Q. Is that all you wish to say on the subject?—A. I do not know of anything else. Perhaps some of the gentlemen here present may wish to add something to what I have said.

This concluded the evidence of the witness.

ANDREW ALLAN, Shipowner, of the city of Montreal, gave the following evidence:—

I wish to corroborate what Mr. McLennan has said. He has stated my views very fully on the subject.

Mr. SMITH.—We know you have very large experience in the shipping trade in Montreal, and if you wish to give us any general views or particular suggestions we will be happy to take them down.

Mr. ALLAN.—I cannot remain in the room for any considerable time, but my son, Mr. Jack Allan, who manages the business, will give any information he has.

Mr SMITH.—Have you any particular statements to make?

Mr. ALLAN.—No; we all agreed that Mr. McLennan should make a statement for us.

Mr. SMITH.—Are you all agreed on the question that I put to Mr. McLennan, namely, that you think that no restriction is necessary as to carrying cattle on the upper decks in the months of October and November?

Mr. ANDREW ALLAN.—I consider the cattle are safer and better on the upper deck than they are on the lower decks.

Q. Is it true that 392 cattle were lost on the "Pomeranian" going home the other day?

Mr. JACK ALLAN.—No; there was not that loss.

Q. How many were lost?—A. Seventy-two.

Q. Did you hear the cause of the loss?—A. There was something wrong with the animals.

Q. Were they distillery or fat cattle?—A. No; they were corn-fed cattle from the Western States, and they were not on deck.

Q. Had you any animals on the upper deck?—A. None.

Q. You generally don't carry cattle on the spar deck during winter?—A. Not after the close of the St. Lawrence navigation.

Q. You carried them up to that time?—A. Yes. The "Pomeranian" sailed from Boston.

Q. Is there any law of inspection at Boston?—A. Yes; there is a very strict law.

Q. Is the inspection by the United States Government or by the insurance companies?—A. It is by both.

Q. Are their inspectors appointed?—A. Yes.

Q. And do they carry cattle on the upper deck?—A. Oh, certainly. We can carry cattle on the upper deck all the year round from the United States if we so wish.

Q. You can carry them if you want to?—A. Yes; but we never do.

Q. To what particulars does the inspection apply in Boston?—A. The inspection for the Government applies to the health of the animals. That is just the same as our inspection here.

Q. But is there any inspection as to the seaworthiness of the ship for carrying cattle?—A. No; the question principally concerned in this enquiry is as to the seaworthiness of the ship and the comfort of the cattle. The insurance inspectors are supposed to pronounce whether it is a fit risk to take them or not.

Q. But there is no Government inspection as to the seaworthiness of the ship, or as to what particular place on the ship they carry the cattle. Has the Government any officer to attend to that in the United States?—A. None at all.

Q. Did you hear if the cattle were killed on the "Pomeranian" or was the mortality caused on account of the heavy weather?—A. It was not on account of the heavy weather.

Q. Were the hatches battened down?—A. No; the ventilation was perfect across.

Q. Was there any cause given for the death of these animals?—A. I have not heard yet by letter. We simply got the information by cable and it simply said these animals died. No cause could be mentioned, as far as the ship was concerned, because she had a good passage and the ventilation was perfect.

Q. And she had not a rough passage across?—A. She had not a very rough passage.

Q. You have no opinions to give beyond what Mr. McLennan has stated?—No.

Q. You can give us no information about the details of the business and the regulations which should be made to control it?—A. I think that the space for the cattle should be 2 feet 6 inches for each animal, or four fat animals in a space of 10 feet.

Q. Would that give them enough room to lie down?—A. Plenty.

Q. What space do you generally allow on your steamers for each head?—A. We allow from 2 feet 6 to 2 feet 8.

Mr. SMITH.—I made a passage on one of your cattle ships, the "Carthaginian," and I noticed the animals were very comfortable, and were lying down most of the time.

Mr. ALLAN.—They lie down on all our steamers.

Q. Do you make any difference in the allowance of room for "stockers"?—A. We put five "stockers" in the space of 10 feet, where four fat cattle would go. We think there should be a larger space for animals weighing over 1,000 pounds.

Q. Have you always allowed that space?—A. I should think so—yes.

Q. Can the animals lie down while there are five animals in the space of 10 feet?—A. Yes.

Q. Can they all lie down at the same time, or only one at a time?—A. They can all lie down at the same time.

Q. Then there is no object in making them stand up?—A. Not at all. They never tried to make them stand up.

Q. Would the trade between Canada and England be destroyed if nothing but dead meat were taken across?—A. I should think most decidedly it would destroy the Canadian trade.

Q. Do you think it would stop our trade if only dead meat was taken across?—A. Yes; it would destroy a very lucrative trade in the Dominion, and I believe also a lucrative trade in England. If it would not destroy it absolutely, it would injure the trade to a great extent.

This concluded the evidence of the witness.

ROBERT REFORD, of the City of Montreal, Agent for the Donaldson, Thomson and Ross Line of Steamers, gave the following evidence:—

By Mr. Smith:

Q. Have you ever had any transient vessels or so-called tramps coming to you at this port?—A. Yes.

Q. You were agent for these transient vessels also?—A. Yes.

Q. Were you agent for any of those vessels carrying cattle on which heavy losses occurred?—A. I was.

Q. Which vessel?—A. The "Linda."

Q. How many cattle did she carry?—A. I am not quite prepared to give the exact number, but I should think somewhere in the vicinity of 500. Mr. Cunningham can give you the information, as he loaded her.

Mr. WM. CUNNINGHAM, Secretary Live Stock Association.—She carried 542 head of cattle.

Q. Do you know the cause of the heavy loss on the "Linda"?—A. I have a strong opinion as to the cause. The cause was two-fold: one cause was that she met with excessively heavy weather. It was very heavy weather during the passage. It blew a hurricane all the time, and I think that was the principal cause of the loss.

Q. Did she carry cattle on her upper deck?—A. She did.

Q. How many cattle did she carry on the upper deck, do you know?—A. I should think about 200.

Q. When did she sail?—A. About the 20th October. The other cause to which I attribute the loss—but I may be mistaken in this—was, perhaps, some want of experience of the part of the captain as regards the carrying of cattle. I say that for the reason that the "Linda" on the second voyage, during which she lost her

cattle, was perfectly fitted for the voyage. When she came for this voyage there was some little indisposition to ship cattle on her, and she was inspected, not only by the cattle shippers themselves, but by the agents of the underwriters, three or four times. As far as I could judge, and I have had a good deal of experience with cattle boats, she was well fitted to carry cattle. The "Linda" was well ventilated.

Q. Did she carry steam fans? A. I am not certain that she had any steam fans, but she had extra ventilation. She had very wide, permanent ventilators, and she was almost a new ship. Her fittings were put up under the inspection of the cattle shippers, and they and the inspectors of the underwriters watched the erection of the stalls and fittings and saw that everything was in proper order. No fault could be found with the fittings or with the ventilation. I am quite satisfied that if any fault could be found not one animal would have gone on board the "Linda." The papers have stated that the vessel was overloaded; such is not the case. The vessel was in perfect sea trim when she left the port of Montreal. The captain had only carried cattle for the second time, as far as I can understand, and when he met this excessively heavy weather he did not use, perhaps, such thoughtfulness as he might have done. If he had run before the gale until it had moderated he might have saved the stock. Of course, that is a question of seamanship which only the captain could speak to. It is only he who could say whether I am right or wrong in this supposition. What leads me to suppose that the loss might have been lessened was that a smaller vessel, called the "Florence," and a much older vessel, sailed a short time afterwards with quite as many cattle on board, and the captain, when he met the heavy weather, ran before the gale to the latitude of the south of Ireland, and landed all his cattle safely with one exception.

Q. What was the loss by the "Linda"?—A. I think it was 386 head out of 582.

Q. Were the houses on the upper deck made of posts and boards?—A. They were made in the ordinary way that all cattle stalls are built in this port, and in the American ports as well.

Q. What was the thickness of the boards?—A. In some parts they are 1 inch thick, and some parts 2 inches, but the frames are all 6-inch and strongly bolted across the deck.

Q. Would it be any advantage to have iron frames on board the ship for these cattle houses?—A. That is a question that I have not sufficient knowledge of the building of ships to say. I think at times that perhaps the iron frames would be an advantage, but that is a question which requires some knowledge of the building of a steamer.

Q. Had these cattle on the "Linda" the usual space of 2 feet 6 inches allowed them?—I do not know. I do not think they had more than 2 feet 2 inches, or 2 feet. They were all "stockers."

Q. What was the destination of the cargo?—A. The "Linda" went to Newcastle, and made the stormiest passage in the whole world around the north coast of Scotland.

Q. Were all the cattle on the upper deck lost?—A. I never received any information as to the exact part of the ship where the cattle were lost from. At the same time that this vessel lost her cattle, the "Maryland" which sailed from Boston, with permanent fittings of the very strongest description, met the same gale, and 400 of her cattle were killed out of a total of 600. The shipping of one single sea will sweep the decks of any ship afloat, whether the fittings are permanent or not.

Q. You say the "Maryland" lost 400 out of 600?—A. I believe she did.

Q. Do you know whether the cattle were washed overboard or killed on the "Linda"?—A. I do not know.

Q. Did you hear any word as to whether the "Linda" was prohibited by the British Government from carrying cattle?—A. I saw in the papers that she was, but I saw afterwards that this prohibition had been changed.

Q. Did you ever know of any case where the captain threw the live cattle overboard?—A. I never did, sir. The captains are always most anxious to make a good record, and they take particular care to carry the cattle over in good condition.

Q. You never heard of any case where the cattle were thrown overboard by the captain?—A. Yes; I have heard of a case.

Q. I think you mentioned that in Ottawa?—A. I heard some mention of a case in which the cattle had been thrown overboard for the safety of the ship and the lives of the persons on board. I have seen it stated in the papers, but I have no personal knowledge of it. It never occurred in any of our boats.

Q. Do you know anything about a vessel called "The Straits of Magellan"?—A. I have heard the name.

Q. You don't know who loaded her?—A. I do not know.

Q. Have you any information to give as to whether a Government supervision of cattle vessels would be advisable?—A. In what respect?

Q. In respect to the seaworthiness of the ship?—A. The trade take that supervision at present, and I think it is very efficiently done. The port warden decides as to the load line of the vessel: if she is found too deep she would not get a clearance to go to sea until she was properly laden.

Q. But that is only as regards grain?—It includes cattle and everything else.

Q. Has the port warden authority to place restriction on a vessel carrying cattle?—A. Certainly. He would not have given a clearance unless the vessel is properly loaded.

MR. THOMAS SHAW, Port Warden.—Every vessel leaving the port of Montreal is under my supervision.

Q. Whether she has grain on board or not?—No matter whether she has grain, deals, or cattle.

Q. And you see to the seaworthiness of the vessel?—A. Yes; no vessel can leave the port of Montreal unless I give her a clearance certificate to say that she is seaworthy.

By Mr. Popham:

Q. You do not consider it within your duty to state whether a vessel is fitted to carry cattle or not?—A. No; but if she loads 50 cattle or 50 tons of cargo, no matter of what kind, and the vessel is below the mark, I would not give her a certificate.

MR. SMITH.—That is if she has any grain on board.—A. No; whether she has grain or not.

Q. You have no authority to interfere with the loading as long as the vessel is not below the mark?—No.

MR. REFORD.—Some vessels are loaded with flour, and without a single bushel of grain, and Mr. Shaw supervises them, just the same as if they were laden with grain.

Mr. Smith to the Port Warden:

Q. Do you supervise vessels of every character?—A. Every vessel leaving the port of Montreal has to receive a certificate from the port warden's office, either from myself or from my deputy. The Customs officers are in attendance at all hours of the day and night, and no vessel can get her clearance without a certificate from me. If the vessel is deeper than the mark they have to discharge the cargo until we tell them that they have taken off enough.

Q. Do you turn your attention particularly to the loading of cattle?—A. We have nothing to do with the loading of cattle unless the ship is overloaded. The port warden's office has nothing whatever to do with the loading of cattle. Twelve years ago the late port warden, in his report, spoke about the loading of cattle.

Q. Would it add to the safety of the ship if you had power, under a special Act, to examine every ship laden with cattle and to say that she was seaworthy?—A. It would depend on the law.

Q. If the law gave you power to see that she was seaworthy, not only as as to hull, but as to her fitness for the cattle shipped, would it be an improvement on the present system?—A. I am under the impression, personally, that if there was an inspector appointed specially for that purpose it would be to the advantage of all concerned.

Q. Do you think they require a special inspection for cattle in addition to what they have at present?—A. I should think so.

Q. You are aware there is an inspection of cattle at present, which is done by the Veterinary Inspector, who sees as to the health of the animals. That comes under the Department of Agriculture, but everything connected with the loading of the ship belongs to the Department of Marine. It is in connection with the loading of cattle principally that I am here to-day. I wish to get the evidence and opinions of all those interested as to whether any changes are desirable, and as to whether we should not oppose this law which has been introduced into the Imperial Parliament and to which I have referred. Of course, the same supervision will always go on as to the health of the animals, because if there were any diseased animals going across to the other side it would destroy the privileges we now have in England in connection with this trade.

MR. REFORD.—I think Mr. Shaw stated correctly that a Government officer, especially appointed to look after the loading of cattle, in connection with the port warden's office in Montreal, would be an advantage. In reference to what we have been speaking about, I wish to say that the weather at the time these losses of cattle occurred was of the most excessively heavy kind. It was the worst weather experienced on the Atlantic for many years. The strongest and largest passenger boats crossing the Atlantic had their decks swept during the gale. I do not think it should be placed against the record of a vessel that she should lose cattle on a single voyage under such exceptional circumstances. Neither is this a just reason for saying that the cattle trade cannot be conducted successfully, because the records of the steamers prove the contrary, and those vessels which lost cattle during this heavy weather have been, many of them, carrying cattle for years, almost without any loss. Until they met with this excessively heavy weather their record was clear. If a vessel takes a sea on board it will sweep her decks, no matter how strong she is.

Q. You think this should not be taken against the character of the ships nor the possibility of conducting this trade?—A. Certainly not. In ordinary weather the steamers that go across with cattle carry the animals over in perfect safety.

Q. Still the records of the boats of the regular lines which take precautions in carrying on this trade seem to show that they do not meet with many losses. It was principally transient vessels which made the losses?—A. That is the case. Of course, their captains had not the same experience.

Q. Mr. Reford, you consider that no restriction should be placed on the loading of cattle in the fall and winter months?—A. I think the vessels can carry cattle as safely during the months of September, October and November as they can during any time of the year. The records of the vessels will show that.

Q. Then you think there should be no restriction in carrying cattle in the fall months?—A. I think not, sir if there is proper inspection as to the number of cattle taken on board ship, and as to the ventilation, and the fittings of the vessels. I would be quite agreeable that a Government official should be appointed with powers over these matters—in fact, I think the steamship interests are a unit in being satisfied that the Government should make and enforce all reasonable regulations for the proper carrying of the animals.

Q. You would not put any restriction on the carrying of cattle on the upper deck in those temporary houses?—A. They are only temporary in a sense. Some of these houses that are called temporary are fitted up so well, as a rule, that the vessel carries these houses almost the entire year. The houses are bolted down opposite the hatches, to allow the loading and the unloading of ships but, as a rule, the fittings remain on the vessel the entire year.

Q. I have seen in some of the papers they call them pasteboard houses?—A. The papers sometimes take considerable license in the way they write.

Q. And you think there is no foundation for such a statement in regard to them?—No, sir; I do not.

Q. You think they are substantial houses?—A. I think they are fairly substantial.

Mr. SMITH.—A friend of mine, Col. Inness, of Aberdeen, sent me an extract from a paper which describes the voyage of the steamer “Straits of Magellan,” which I will read to you. The extract from the paper is as follows:—

From “The Aberdeen Evening Express” (Scotland).

MONDAY, 17th November, 1890.

“THE CANADIAN CATTLE TRADE.

“TERRIBLE PASSAGE OF A STEAMER.

“162 ANIMALS SWEEPED OVERBOARD.

With the arrival at Aberdeen of the steamer “Straits of Magellan” from Montreal, yesterday morning, with another consignment of Canadian cattle, the news of the first great disaster in the trade with this port has come to hand, Captain Clark on his arrival reporting the loss of 162 cattle. It appears that the Straits of Magellan left Montreal on the 1st November. For the first few days the weather was fine, and the wind favourable. When the vessel had been five days out, however, the wind changed, and everything was put in order for meeting a storm. A fog settled over the sea, and when Belleisle was sighted on Thursday, the 6th inst., a perfect gale was raging. The wind increased and the sea ran very high. To add to the discomfort of the situation, a close, drizzling rain fell, and a most vigilant lookout had to be kept. Towards the afternoon of Thursday the rain changed into snow, and a regular squall was experienced. The pumps had to be sounded twice a day, while the greatest care had to be exercised in keeping the cattle from breaking loose. Heavy seas were shipped, and about midnight of the same day some of the cattle pens were “started” and the hatches had to be battened down. What with the noise of the wind and the bellowing of the cattle, everything was for a time in confusion. On the 7th the hurricane increased in force, and the steamer kept shipping tremendous seas. The watch on deck had to take great precautions, else they would have been swept overboard. One of the seas smashed the cattle stalls forward, carrying a large number of cattle and stalls overboard, and completely wrecking one of the boats which was slung near the bridge. The starboard gangways were also swept overboard. So terrible was the force of the seas that iron stanchions were broken and twisted, and everything movable on deck cleared. A slight abatement in the gale took place on the evening of the 8th, and it was then deemed prudent to open the hatches for the purpose of ascertaining what condition the animals were in. It was seen next day (the 9th) that the cattle had suffered severely, a number dying from the injuries which they had sustained. Unfortunately, the evening of the same day saw the gale again increase in force. The wind shifted from one quarter to another with such rapidity, as to make it impossible to ascertain which was the best course to steer. Hatches had again to be battened down, and the engines put at half-speed. The decks were continually swept, and fears were beginning to be entertained as to the vessel’s safety, when a change took place for the better. It was only momentary, however, for on the 10th the gale raged as fiercely as ever. The crew were kept at the pumps, and the greatest care had to be taken with regard to the steering. About four o’clock on the morning of the 10th the cattle pens forward were completely smashed, and a number of the animals carried overboard. The cattle both forward and aft broke loose, and a scene of wild confusion took place, the poor beasts being dashed hither and thither. The sea continued to make, the wind shifted from point to point, and volumes of water broke over the vessel. Again a number of cattle were lost, the rails and stanchions of the steamer, sheds, and other material also going by the board. The ventilators were broken, and the crew were under the necessity of cut-

ting new sails to cover the hatchways. For a few days the gale continued without abatement, and then, on the 14th, a severe thunderstorm was experienced. Again the vessel, which had been going for a day or two under full steam, had to be brought to, and the speed reduced one-half. By this time all hands were completely worn out with the exertions which had to be made, and to their great relief the Butt of Lewis was sighted on Friday night. The wind then fell off, and on Saturday morning, when Dunnet Head was signalled, the sea was comparatively calm. The "Straits of Magellan" arrived off Girdleness on Saturday night about seven o'clock, and, as already mentioned, was berthed at Poera Pier yesterday morning. Her decks presented a strange appearance, the carcasses of a number of the animals lying about among the straw. When the steamer left Montreal she had on board 660 animals, but on arriving at Aberdeen the number was reduced to 498. The cattle are consigned to Messrs. McDonald, Fraser & Co. and Messrs. Robertson & Johnston. The "Straits of Magellan" is one of the largest vessels—perhaps the largest—which has ever entered Aberdeen Harbour. Her dimensions are—Length, 360'3; breadth, 35'8 feet; depth, 26'4 feet; gross tonnage, 2,651. The brokers were, as usual, Messrs. Richard Cannon & Co. Captain Crombie saw to the berthing of the steamer, a very difficult undertaking owing to her length; and Inspector Strangeways superintended the landing of the animals.

The steamer "Alvona" (Captain Yule) arrived at Aberdeen from Montreal on Saturday with 487 cattle and 140 sheep. Captain Yule states he left Montreal on 1st November, and experienced a very rough passage. In fact, all the way he encountered heavy head winds and tempestuous seas. On one occasion, during the late gale, he had to run three days before the wind, and spent 70 gallons of oil in trying to lessen the force of the sea. When off Buchanness on Saturday the "Alvona" was struck by a heavy sea, and owing to the heavy swell at the harbour bar had to lie off in the bay for about an hour. The cattle are consigned to Messrs. McDonald, Fraser & Co., and to Messrs. Robertson & Johnston. The sheep were consigned to Mr. A. Middleton, Kittybrewster. Besides the cattle and sheep the steamer had a general cargo of goods consisting of 2,000 qrs. of grain for Messrs. Grant & Co., 300 barrels of apples for Messrs. Ingram & Mortimer, and 160 standards of deal for Messrs. John Fleming & Co."

Q. It would seem from this that these houses on the decks of the "Straits of Magellan" were not sufficiently strong for the gale, and that she lost 162 cattle out of 600?—A. I do not think that is fair reasoning, Mr. Smith.

Q. I am not reasoning on the matter. I am reading to you an account which says that the houses on the deck were swept away?—A. If a vessel should ship a sea in a gale it may wash away anything on the deck. Risk has to be taken on vessels going across the ocean, and if it is said that the cattle trade should be stopped on account of some losses it might as well be said that no one should be allowed to go to sea because people are lost on board ship. We hear accounts constantly of passenger ships, between England and America, having their decks swept and passengers killed.

Q. I am speaking now of those temporary houses on deck?—A. In heavy weather any vessel may have her deck swept. I am quite sure the "Straits of Magellan" was well fitted up in this port, and the account, which you have read, says the sea broke even her iron staunchions. As far as we are concerned, we take as great care in fitting up the tramp steamers as the regular liners for this cattle trade. I think the other agents of the steamships take as much pains in this matter as we do. Our business depends on the proper carrying of the cattle, and the owners and insurance companies are as well interested in their safe transit. We are not going to send a vessel to sea with improperly constructed and weak fittings, because it would injure the business and entail serious loss.

Q. Would the carrying of cattle be a profitable business if no cattle were taken on the upper decks in these houses we are speaking of?—A. No.

Q. The trade would not be profitable without that?—A. No. We have got down to carrying cargoes at almost nominal rates, and if this cattle trade were

abolished or the carrying of cattle on the upper decks prohibited one-half the trade coming to the St. Lawrence would stop. It would be an injury to every man in the Dominion, and especially to the farmers. As a matter of fact, we have carried grain from this port at rates which did not pay the cost of putting the grain into the vessel and taking it out again. Even with the cargoes of cattle on deck the vessels have not been paying. I must say that I do not think that the heavy losses of cattle this year form any argument as to the stoppage of the trade. On every occasion on which cattle were lost they were lost under exceptional circumstances and during exceptionally heavy weather.

Q. You are quite opposed to any restriction being placed on cattle being carried on the upper deck during the fall months of October and November?—A. I think any such restriction is unnecessary. I think it will be a matter for the Government to appoint an officer attached to the port warden's office to see that the fittings on the ships and everything else in connection with the carrying of cattle are in proper order and according to Government regulations. That is all that is necessary. I also think that 2 feet 6 inches for each large animal, and 2 feet each for "stockers" is ample space.

Q. Would a space of 2 feet each for "stockers" permit them to lie down?—A. Yes sir, every one of them.

Q. Could they lie down the whole voyage if they liked?—A. Yes.

Q. And is there any object in making the animal stand up during the voyage?—A. I never heard of such a thing until recently. My experience is that the animals lie down on board a vessel. I never heard of animals being made to stand up, and I do not think any such thing was ever done. I am sure that a space of 2 feet 6 inches for large cattle, and putting five stockers in a pen for four fat cattle, would give them ample room to lie down during the voyage and make them very comfortable.

Q. You are also of the same opinion as other gentlemen who have spoken, that it would destroy the trade of the port if the exportation of live cattle were to be prohibited?—A. I think it would not only destroy the trade of the port, but that it would also be a calamitous thing in the interest of the farmers and the whole country generally. I think the export cattle trade is one of very great importance to the farming interests of the Dominion, and I also think, from what I have heard from persons in the old country, that the export of cattle from Canada is looked upon as of deep importance to the welfare of the farmers in many parts of England and Scotland. Messrs. William Thompson & Sons, for whom we act, the owners of the Thompson Line, were the initiators of this trade on the east coast of England. We commenced first by shipping to Aberdeen, and now we are carrying cattle to Dundee and Newcastle, England.

Mr. SMITH.—Col. Innes, of Aberdeen, writes me that he was the initiator of the trade,—that he induced people to go into it?—A. It was through the Thompsons, of Dundee, that he did so. They gave him the facilities for shipping these cattle, and the Messrs. Thompson also induced the Harbour Commissioners of Dundee to establish yards in Dundee for the reception of cattle at very considerable expense to the port. Quite a number of cargoes of cattle have been sent there, and it has been found that the farmers of that part of Scotland buy the Canadian "stockers" with the greatest avidity, and they report upon them as being very superior cattle for fattening purposes. All the cargoes of cattle which have been sent over have found a ready sale and have been highly commended by the buyers, who come from all parts of Scotland to these sales at Dundee. If the cattle had not been landed in good order or properly attended to on board ship they would not have such a ready sale on the other side, and they would not have given such satisfactory results. The results have been so satisfactory that the Harbour Commissioners of Dundee have decided to double the accommodation for the cattle at that port. Last season the accommodation, which was for 900 or 1,000 head, was found to be quite inadequate, and this coming season the accommodation is to be doubled. I understand that all the cattle which have been sent to Scotland have given great satisfaction and have

been profitable to the buyers, so that the trade has become an important element for the farming community in Scotland and the north of England.

Q. Do you not think that when cattle are carried on the upper decks in November they suffer from the cold?—A. They do not, Sir, as far as I understand; I never heard of cattle suffering from cold on board ship. There may be exceptional cases, such as were experienced by the terrible gales this Fall, but these cases are very rare.

Q. I saw it stated that in the case of one vessel, when the cattle landed, the people would not look at them, as they were nearly half dead with the cold, and it was suspected they suffered from pleuro-pneumonia?—A. The cause assigned to me was, that these cattle, which were accused, and falsely accused, of having pleuro-pneumonia, were so accused in this way: The lairs at Dundee were only able to accommodate about 900 head of cattle, and it happened that two vessels got into Dundee at the same time with large cargoes of cattle. The latter vessel on arriving was not allowed to discharge her cattle until the lairs were cleared of the first cargo, consequently she had to lie in the harbour of Dundee, and the cattle had not as good air during the time she was lying there as they had during the voyage across. When the vessel is going through the water the air flows through the ventilators and keeps the cattle supplied with an abundant quantity of fresh air, but when the vessel is lying still that supply of air is largely cut off. That was the cause of the trouble with these cattle in Dundee. The cattle were allowed to remain there a considerable time awaiting the clearance of the lairs from the previous cargo and they commenced to sicken for want of fresh air. The moment it was cabled over here that the cattle were suspected to be afflicted with pleuro-pneumonia, I at once cabled to the Messrs. Thompson, and others interested, that there was no such thing as pleuro-pneumonia in Canada. I asked them to get the best veterinary advice from London, Edinburgh and Glasgow, to have the cattle inspected, and to establish the fact that there was no pleuro-pneumonia. That was done, and the fact was proven that there was nothing wrong with the cattle, except their suffering from want of good air, during the time the vessel was lying in the harbour at Dundee. I think Mr. Bickerdike will be bear me out in that statement.

MR. BICKERDIKE.—That is quite so.

MR. SMITH.—Do you think there is anything in the suggestion that the space for cattle should be exempted from the charge for tonnage dues. I have letters from Col. Innes, which read as follows:—

LEARNEY, ABERDEEN, 11th December, 1890.

DEAR SIR,—About four weeks ago I wrote to you at some length on the present position of the store cattle trade from Canada to the Scotch ports on the east coast, viz., Aberdeen and Dundee; and I dwelt mostly on two points: 1st. The necessity of great vigilance on the part of the Canadian authorities to guard against the transmission of contagious disease by the surreptitious embarkation of States' cattle from Montreal. 2nd. The very great losses of cattle on board the steamer in stormy weather, which I attribute to the want of adequate protection on deck, and to the want of sufficient means of ventilation below when it was necessary to batten down the hatches.

I am happy to say that as regards contagious disease, there has been no further cause for alarm, since the date of my letter, and whatever may have been the disease which appeared amongst the cattle in the two cargoes landed at Dundee it apparently was not pleuro-pneumonia.

But, as to the losses of cattle on board steamers my letter had not reached you ere what I urged on that subject received very remarkable confirmation by the arrival of 5 ships within 8 days at Aberdeen and Dundee with a loss of 540 head of cattle and the remainder generally damaged. The steamers had suffered no material damage and made their voyage in average time, but in every case the decks were swept. I see by the papers that even a heavier loss was experienced on board a ship arriving at Newcastle, to which case reference was made in a question put to Mr. Chaplin in Parliament.

These losses of cattle are attracting a great deal of attention, and if I am right in attributing them to the want of protection on deck and of ventilation below, and that these wants can be obviated by the employment of more suitably constructed ships, it was fortunate that I had already given publicity to this explanation, otherwise the enemies of the trade would have had it all their own way and Mr. Plimsoll's most extreme statements would have seemed to be completely justified.

I have been in communication on the subject with Mr. E. Thompson of the shippowning firm of Geo. Thompson & Co., of London and Aberdeen, and I enclose a copy of a letter addressed to him which he has acknowledged with the promise to give it deliberate consideration.

I see, by a telegram published in to-day's papers, that on your side there has been a meeting of shippers of cattle at Montreal to protest against any action of the British Board of Agriculture to stop the employment of unfit steamers in the trade, and that a representation of their case is to be sent to this country. Now, I trust in the face of these recent losses, your shippers will see that it will be for their interest to direct our efforts to remove the causes of the losses, rather than to attempt to minimize them, and if I am right in ascribing the losses to the employment of ships unsuitably constructed for the trade, the sooner we get properly constructed ships built the better. As you, no doubt, know very well the rule of tonnage measurement is an offtake and a difficult one to overcome. But if you can show that a modification of the rate is absolutely as essential for a trade which affects so materially the food supply of the people, no doubt means will be found to meet the difficulty.

I shall be glad to aid in any way I can in a business which I have taken so much interest and shall look anxiously for your views on the subject.

I am yours faithfully,

J. W. INNES.

P.S.—I posted two days ago a newspaper with an article on the question, and I post with this a copy of the same paper, with a letter by myself on the subject.

Another letter from Colonel Innes contains the following:—

W. H. SMITH, Esq.,
Deputy Minister of Marine,
Ottawa.

LEARNEY, ABERDEEN.

DEAR SIR,—Reverting to a conversation we lately had on the subject of the defects of the steamship transport provided for the Canadian cattle trade, I enclose cuttings from the Aberdeen papers containing part of a letter to Mr. W. Smith, Deputy Minister of Marine to the Canadian Government, which state in short what I brought under your notice, viz., that steamers require to be specially constructed for this cattle trade, with the upper deck protected by a continuous cover or spar-deck between the bridge of the forecastle and between the bridge and the poop, and that the lower deck should be ventilated by effective air-pumps driven by the engine. I also enclose cuttings from the newspapers giving accounts of losses of cattle in 5 cattle ships which have recently arrived at Aberdeen and Dundee from Montreal since the date of our conversation. These confirm to the letter my contention that the losses of cattle are mainly attributable to the want of those necessary provisions of construction for a safe cattle ship. The losses are very serious, amounting to a total of 546 cattle and representing a value of £6,500, and being about one-fifth of the number of cattle shipped in these steamers.

I maintain that with properly constructed ships these cattle would have reached port safely.

I rely on your knowledge and experience in the matters of shipbuilding and ship owning to aid me in bringing this want under the notice of those who may be expected to provide for it. A few agriculturists have, at their own cost and risk, created a very big trade for the port of Aberdeen, but surely we are not expected to

start another company and become shipbuilders and shipowners to provide transport for it. I am sure that if it was brought rightly under the notice of those who are engaged in that business, there is enterprise enough to undertake the business."

Q. He thinks that the construction of the ships is to blame, and the bringing of the covered in space into the measurement for tonnage dues. He thinks that if this were changed, it would remedy the difficulty?—A. I do not think so. I do not think it is the construction of the ship that is entirely to blame in this matter. There is another matter which Mr. McLennan brought up, and which is also to blame, and that is the inefficiency of the cattle attendants in many cases. I do think that the attendants should be under the supervision of the captain, and that they should be men accustomed to the sea, as well as accustomed to taking care of cattle.

Q. Then you are one of those who think that it would be advisable to bring the cattle men under the discipline of the captain?—A. I do, sir. I would at the same time wish that the cattle shippers should be properly represented on the ships, so that they and the underwriters would be satisfied as to every care being taken of the animals on the voyage across.

Q. Of course, we are all aware that if the cattle men sign articles they are under the orders and discipline of the captain?—A. Quite so, sir.

Q. You think that if that were done, and if a proper class of men were selected as cattle men, that many of the difficulties at present would disappear?—A. I do sir. I think the difficulties would disappear if that and other improvements were made.

Q. I suppose you are aware that this subject of shipping cattle men on the ship's articles has been under the consideration of the English Government before now. The Imperial Board of Trade, in September 1887, issued an order, in which they say that by the Merchant Shipping Act of 1854 the term "seaman" includes every person, except masters, pilots and apprentice employed or engaged in any capacity on board any ship. I will read the portion of the Act referring to this.

BOARD OF TRADE, MARINE DEPARTMENT, September, 1887.

MERCHANTS SHIPPING ACTS, 1854 to 1876.

Notice to Owners and Masters of Steamships.

CATTLEMEN.

By the Merchant Shipping Act, 1854, the term "Seaman" includes every person (except Masters, Pilots and Apprentices duly indentured and registered) employed or engaged in any capacity on board ship.

It has come to the notice of the Board of Trade that persons are employed or engaged on Steamships in a capacity known as cattlemen, and that in the case of certain of the Steamships in which they are so engaged on employed, they are neither entered on the Articles of Agreement, nor are their names inserted in the Lists of Passengers.

The Master of any ship in which the Law is not complied with (if a foreign going ship) or the Master and Owner (if a home trade ship) for each failure to comply with the above requirement incurs the penalty of £5, imposed by Section 157 of the Merchant Shipping Act, 1854. The Board of Trade desire to call attention to the penalties incurred by neglect of the above provisions, and desire that Superintendents of Mercantile Marine Offices should at the time of discharging crews call the attention of Masters to the point, and see that Cattlemen have been properly entered and described in the Articles of Agreement, or entered in the Passenger Lists.

When cattlemen are returning from this Country to American or other foreign ports of shipment, if they are not servants of the Owner of the Ship, and when they are not for the voyage engaged or employed in any capacity on board of her, may have their names entered in the Passenger Lists as Passengers, instead of being entered in the Articles of Agreement as Cattlemen, and the attention of Masters should be called to these points at the time of signing Articles of Agreement.

It must, however, be borne in mind, than when more than 12 persons other than the Master and Crew and owner, his family and servant are carried in a steamship, in respect of which no Passenger certificate has been granted, the owner thereof becomes liable to a penalty of £100, and the Master to the further penalty of £20, imposed by section 318, of the Merchant Shipping Act, 1854.

(Signed) HENRY G. CALCRAFT,

Secretary.

THOMAS GRAY,

Assistant Secretary, Marine Department.

Your views exactly coincide with what the law requires that the men in charge of cattle going across the ocean should be shipped as part of the crew?—A. Yes.

Q. And then they can be compelled to do their work. If they are not shipped as part of the crew they are, to a certain extent, independant of the captain?—A. Entirely so.

Q. And they might go to their beds and lie there, and not get up to do their work?—A. Yes, and they do that largely.

Q. And then the work has to be done by the sailors, I suppose?—A. Yes; very frequently. The cattle have to be looked after by the sailors, and the captain and officers of the ship. Of course, there are exceptions to that, and I do not wish it to be supposed at all, for a moment, that the cattle men are careless regarding the attendance of the cattle.

Q. But, under the present system, there is room for such neglect?—A. Yes; there is room under the present system. The reason the cattle men are not on the ship's articles is that the cattle shippers were under the impression that by sending over their own foremen and cattle men, whom they knew and had confidence in, their cattle would receive better attention than if they left them in charge of the ship. There, I think, they made a mistake.

Q. Do you not think it would be advisable to make some change, if possible, in that direction, so as to have the ship or the agent of the ship responsible for the safety of the cattle, by having them ship their own men to attend to the cattle and cause them to become part of the crew?—A. As far as the selection of the men and the taking care of the cattle, is concerned, it is all right, but the question is, would it make the ship or the captain responsible for any accident that might happen to the cattle?

Q. He would have the responsibility of taking care of them?—A. Yes, sir; but on some ships we get first-rate men and on others they are not so good.

Q. If you take a man off the wharf, not knowing whether he has been at sea before, or not knowing whether he knows anything about the care of cattle, I suppose you could not expect to get good men always?—A. That is often the case, and I have spoken to the cattle shippers about it. Some have expressed themselves as desirous that a change should be made in the mode of shipping the cattle men, but others have expressed themselves as fearing that if the selection of the men were left to the shipowners the cattle would not be as well attended to as at present. I think, however, the change is well worthy of a trial, and I am quite sure it would result in satisfaction to all concerned. I think that a captain and the officers of a ship would be anxious to look after the good condition of the cattle, and to see them arrive safely and in good condition under their charge. I am sure that every officer on board a ship would take extra care to land their cattle in as good order as possible. There would be a rivalry amongst them to see which would land its cattle in the best condition.

Q. Would you leave the selection of the cattle men to the captain of the ship or to the agent?—A. I think the cattle-men should be permanent men on board the ship, and that a charge should be made on the owners for so much per head at the extra expense. This charge would be made without a view to profit and only to bear the cost of taking care of the animals.

Q. You think the selection of the cattle-men should be left to the captain and the agent of the ship?—A. Yes; to the owners of the ship.

Q. And you would charge a small amount to bear the expense?—A. Yes; but it would not be any more than the owners of the cattle now pay to these men.

Q. Of course, they have to pay that charge now in another way, but I suppose they think they are protecting their own interests by selecting their own men, whereas, they do not see how the men work after they leave the port?—A. As a rule, they do not see them after they leave the port.

Q. Have you any opinion to offer, Mr. Reford, as to the regulations which would have to be adopted to make these improvements in the cattle carrying trade? If we procure legislation for inspection there would have to be regulations made under that statute. Do you wish to make any suggestions as to what regulations should be made by the Government?—A. That is a point requiring considerable deliberation, and it would be better to consider it afterwards. When the legislation is procured it would be another subject to consider what rules and regulations should be made. There are certain leading principles which you would have to observe, but I would not like to give any opinion on the point without consideration.

Q. Do you think that every vessel carrying cattle should be provided with steam fans?—A. That is also a point upon which I should like to reserve an opinion. I believe that if vessels carried steam fans it would be a very great auxiliary to the safety of the cattle.

Q. Do you think it would be a hardship to steamship owners to compel every vessel carrying cattle to have steam fans?—A. It might be. I would not like to express a decided opinion on that point, but that would probably come under the Government inspector's duties.

Q. Of course it would come under the duties of the inspector, but he must be governed by certain rules and regulations. If we procure legislation for a Government inspection, then, under that authority would be made the rules and regulations to be carried out?—A. That is a matter I would like to give some consideration to before answering positively.

Q. No doubt, if such a regulation were made it might shut out from this trade some of the transient vessels that come here, if they are not so provided with steam fans?—A. I think that everything that is absolutely necessary to provide for the safety and comfort of the animals, and those in charge of the animals, should be regulated by the Government. That is the general principle I would establish, so that there could be no future complaints as regards inhumanity to the animals or as regards anything else concerning the trade. I think the cattle export trade is a growing one, and is of immense importance to the Dominion.

Q. You do not think there is any inhumanity in shipping cattle on the upper deck in November?—I do not think so.

Q. In the case of vessels meeting with heavy weather and battening down their hatches, do you think there is any inhumanity in carrying animals without proper machinery to ventilate the holds?—A. I think there would be inhumanity unless the ventilation is sufficient.

Q. That would indicate that there should be some arrangement for giving air to the cattle?—A. Yes; there should be some arrangement to give them plenty of air, either by fans or otherwise. There are other ways of giving the animals air, but perhaps the fans would be the most efficient.

Q. Would not that induce a better class of vessels to come here to participate in the cattle carrying trade?—A. If these restrictions were in force?

Q. Yes?—A. I think it would, sir.

Q. As a matter of fact, do not transient vessels, or so-called "tramps," come here, expecting a cargo of cattle, without being as well fitted up as the regular liners?—A. Some of these so-called tramps are perhaps not so well fitted as the regular liners, but there are some "tramps" coming to this port, which are designated by the name of "tramps," but which are really first-class vessels. There are several old vessels of the Cunard Line now running here, and I would not like to say anything at all that

would depreciate these vessels. They are a very useful class of vessels, and they have done a good deal to build up the St. Lawrence shipping trade. I certainly would not like to say anything strong against them, for I think it would be a loss to the country, if they were prevented from engaging in this trade. Many of these boats could be fitted up at small expense and made perfectly efficient. As long as they comply with the regulations of the Government there is no reason at all why they should not have their full share of the trade.

Q. Are you aware of any inferior vessels having carried cattle from this port. Does that come within your knowledge?—A. No; I have not occasion to board any vessels except those coming to ourselves, and I have no opinion to offer regarding that, as I have not inspected the vessels.

Q. You know nothing about any vessels, excepting those consigned to yourself?—A. No, sir. Anything I could say about the other vessels would be in their favour. As far as I could see the vessels are all good vessels. I never went on board them, and what their facilities for the trade were I do not know, nor what kind of officers they had; but I certainly do not know anything to their discredit.

Q. Did it not happen that most of the vessels on which these losses of cattle occurred were so-called "tramps"?—A. I would rather not give any opinion on that point. Any opinion I might give on the point might be considered as given with an interested motive, and I am not in a position to speak.

Q. We have the evidence that the steamers belonging to the regular lines have carried their cattle over with a mere nominal loss—a loss of $\frac{1}{2}$ per cent. or so.—A. I presume these gentlemen who are interested in the other boats will also furnish you with data which will be the best guide for you as to how they carried the cattle. The moment a vessel reaches the other side the loss on the ship is cabled to us, and announced at once. We keep that record, and I presume the gentlemen connected with the other boats do the same thing, and can give the data as well as we can. Perhaps if their data were given, it would not look so bad.

Q. Were you agent for any other of these boats except the "Linda"?—A. Yes; the "Florence."

Q. How many did she lose?—A. She went over the same time, or a few days after the "Linda," on the same voyage, and lost only one animal out of 420.

Q. Did any other of these heavy losses occur on vessels for which you were agent?—A. No, sir. The "Linda" was the only "tramp" vessel that made any very heavy loss. We had a loss on one of our regular liners—the "Circe."

Q. How many did she lose?—A. I think she lost 208 out of about 600.

Q. What was the cause of the loss on board the "Circe"? Were the cattle on the upper decks swept away?—A. No, sir. I believe the loss was divided between the two decks, the upper and the lower. She met with these tidal waves, and although the captain did everything in his power to save the cattle, yet several of these waves swept her decks and caused a heavy loss. Her record, previous to this, was an exceedingly good one, and her captain was a man of very great experience in the cattle-carrying trade.

Q. It has been said by some people that the loading of a large cargo of cattle on the upper deck interferes with the working of the ship. Do you know anything about that?—A. I would be in a position to speak of that if such had been the case, but I never heard a complaint from the officers regarding it.

Q. It does not interfere with the working of the ship?—A. Not at all, sir.

Q. Did you hear any reason why the loss was so heavy on board the "Circe"?—A. It was on account of the exceedingly heavy weather she met on the voyage.

Q. Were the animals washed overboard, or were they suffocated?—A. I have had no information as regards the exact manner of the deaths.

Q. Were there any washed overboard, did you hear?—A. I did not.

Q. Had you anything to do with the steamer "Escalona"?—A. Yes, Sir.

Q. Did you hear how the losses occurred on board the "Escalona"?—A. The cause was the exceptionally heavy weather she encountered. That is a boat with a splendid record. I think you have the record of the Thompson Line for the last nine

years, and during these nine years it shows that we carried 187,000 head of cattle, and only lost about $\frac{1}{2}$ per cent.

Q. We heard of the losses on the Allan and Beaver Lines. Were your losses about the same?—A. I think they are about the same. I will give you the statement of losses as follows:

The three lines represented here by Messrs. R. Reford & Co. show these results:—

DONALDSON LINE.

Year.	No. of Cattle.	Loss.	Percentage.
1882.....	3,200	18	·56
1883.....	5,930	34	·57
1884.....	7,929	36	·45
1885.....	6,631	17	·25
1886.....	9,316	12	·13
1887.....	9,052	27	·30
1888.....	8,936	19	·21
1889.....	13,121	178	1·36
1890.....	17,745	300	1·69
	81,870	641	·78

Deducting loss on three steamers in exceptionally heavy November hurricanes, the average loss for the nine years is reduced to ·36 of 1 per cent.

TEMPERLEY AND ROSS LINES.

Year.	No. of Cattle.	Loss.	Percentage.
1882.....	1,241	14	1·13
1883.....	4,033	11	·27
1884.....	3,119	127	4·07
1885.....	2,726	5	·18
1886.....	3,479	91	2·61
1887.....	1,987	105	5·28
1888.....	No steamers.		
1889.....	4,309	9	·21
1890.....	6,415	206	3·21
	27,309	568	2·08

Deducting loss on four steamers in exceptionally heavy hurricanes, the average loss for eight years is reduced to ·53 of one per cent.

THOMSON LINE.

Year.	Cattle shipped.	Loss.	Percentage.
1889.....	8,812	21	·23
1890.....	12,005	51	·42
1882-90.....	61,263	413	·67

Q. What is the cause of the death of some half dozen animals on the voyage?—

A. I can only give an opinion as to the cause. I suppose some of the animals are shaken up by the jolting of the cars on a long railway journey, and some are probably not shipped in the best condition. An animal may come off the train in a bad condition on account of fatigue, and the sickness may only develop on board ship. There is one cause which is mentioned by those who take a good deal of interest in the causes of the death of the animals. They say that they have noticed that where mortality has occurred it has very largely been among the cows in calf that were sent over.

Q. Is that among the “stockers”?—A. I do not know whether it is among the “stockers,” or not. There are frequently quite a number of births on board ship.

among the cattle, and, as is to be supposed, an animal in that state has not got its full strength for the voyage. I think that this a practice that ought to be abandoned, and that a cow in calf should not be shipped. There have been great improvements in late years in the handling of cattle in the port of Montreal. It used to be that the cattle were loaded immediatly off the cars, but of late there have been pains taken to give the cattle a rest at the Grand Trunk and Canadian Pacific Railway stock yards. The fat cattle are allowed to remain in the stock yards for twenty-four hours, where they are watered and fed. They are brought down in the cars in close proximity to the steamer on which they are to be loaded, and as a rule they are put on board ship in good order. However, there are improvements to be made in this direction also.

Q. It has been suggested that the cattle should be loaded only after a certain hour at night. Is there any difficulty about loading them in the day time?—A. The best time is to load them in the early morning, before the usual work on the wharves commences for the day.

Q. Would that be between 6 o'clock at night and 8 o'clock in the morning?—A. I think the cattle men here are well able to speak on that point. I think they will agree with me that the proper time is to load the cattle early in the morning, when the wharves are quiet and before the traffic comes on them. Some nights it is safe to load cattle but other nights are dark, and there would be difficulty in loading them.

Q. Do you think that a specification as to the hours at which cattle should be loaded should form part of the Government regulations?—A. I do not think that should form part of the regulations. I think it should be a matter of discretion and arrangement between an officer in connection with the port warden's department and the cattle shippers and steamship agents. They are all interested in seeing this portion of the work done in the very best possible way.

Q. Have you ever known in the course of your experience of any cruelty to the animals, either in shipping them or taking them on the cars?—A. I have not, sir—with the exception of a man being lazy and not giving proper attention to the animals, which I think has occasionally been the case.

Q. And with the exception of gales at sea, in which, of course, the cattle suffered?—A. With that exception, I am sure the animals are well taken care of.

Q. Have you heard of any case where the cattle broke loose on the voyage during storms?—A. Do you mean that they broke loose from the ropes?

Q. Yes; it has been stated that they frequently broke loose and caused a good deal of injury and damage?—A. If the stalls were knocked down of course the cattle would get loose, but I have heard of no case in which the cattle got loose during ordinary weather. There has been a method adopted by ships of late, to which I might refer, which is a good thing in heavy weather, and that is to use oil at sea on board the cattle ships. I think many ships adopt this plan when they get into a gale of wind. They eject oil on the sea and this keeps the waves from breaking over the ship. I think it should be a regulation of the Government that every cattle ship should carry a sufficient supply of oil, with proper apparatus for using it at sea, and the captains should be obliged to use it during heavy weather. It has been used by many vessels with good effect.

Q. Do you think it would be any improvement to the trade if freights were collected only on the number of animals landed alive, so as to induce the steamship owners and their officers to take more care of the cattle when they are taking them across?—I have no opinion to offer on that point.

Q. Do you not think it would be an incentive to the steamships to take care of the cattle if they would be paid only for the number they landed alive on the other side?—A. It is contrary to the spirit and the manner in which business is done to make any enactment of that sort. If I were the owner of the cattle, of course I would not object to that, but I do not think it is a measure which you could enforce. I do not think a law could be made to enforce that provision, and I do not think it is worth speaking about.

Q. If such a thing were done it would not affect the regular liners to any great extent?—A. On the basis of the present losses it would not be a very serious matter for the steamship owners.

Q. It has been suggested that steamers should provide accommodation for the men in charge of cattle equal to the accommodation for intermediate passengers, both on the outward and return journey. What do you think of that?—A. When that matter came up at Ottawa, in 1886, it was agreed by the steamship agents that accommodation would be provided for the cattle men, and we have provided accommodation equal to intermediate accommodation in every ship of our regular lines. That was urged upon us as an incentive that if it were done we would get a better class of men to take charge of the cattle. I maintain that we did fulfil our part of that obligation entirely and fully. We provided the accommodation for the men. We provided them with eating utensils and blankets, and a special steward to look after them. But I regret to say I have seen very little improvement in the men. So bad were the men that most of the articles after being used by them were found to be so filthy that they had to be thrown overboard and replaced by new articles every voyage. That has been one of the sore points that I have felt in regard to the cattle-carrying trade.

Q. Did you give the cattle men as good as intermediate accommodation?—A. Yes, sir; we gave them very good accommodation.

Q. Do you ever allow cattle to be carried on the hatches of your ships?—A. Yes, sir.

Q. Do you think it is a good plan to carry cattle on the hatches?—A. On some vessels, yes; and on some vessels, no. The hatches on different vessels are of different construction. Some vessels have got hatches of only sufficient size to give the requisite amount of air and ventilation, while other vessels have got unusually large hatches, far larger than are required for ventilation, and on such vessels I think it is quite fair that they should carry cattle on the hatches. That is a matter that should be left entirely to the discretion of the officer who is spoken of as to be appointed in connection with the port warden's office.

Q. Do you think there should be any law or regulation made prohibiting the carrying of cattle on the hatches?—A. No sir. I think that should be left to the discretion of the inspector.

Q. Are the cattle as comfortable on the hatches as standing on the deck?—A. I think as a rule the hatches are the most comfortable places, because they have a most plentiful supply of air.

Q. Would you approve of the system of licensing vessels for carrying cattle, and depriving them of that license if they do not succeed in carrying their cattle properly?—A. Well, that is a point I would like to give some thought to.

Q. You are not prepared to give any opinion on that?—A. As a matter of fact, should this officer be appointed, as is proposed, in connection with the port warden's office, I should suppose that he would not allow any vessel to carry cattle if he thought her inefficient. That would surely be part of his work.

Q. It has been suggested that a vessel should have a certificate from the Government to carry cattle, and that certain vessels which were known to be inefficient for that purpose should not get such a certificate. Have you any opinion to offer as to whether such a system as that would be a good one?—A. I have not, sir. I think the cause of the losses of cattle is sometimes not the fault of the vessel, but the fault of the captain.

Q. Would you prefer a system by which every vessel would take her chance of being declared inefficient when she is loaded and inspected, instead of giving one vessel a license and refusing it to another one?—A. I would, sir.

Q. You mentioned that you did not hear that the "Linda" had been refused a license by the British Government?—A. I heard she had been scheduled, but that the restriction had been afterwards removed at the instance of the owners, who brought forward proof that the vessel was properly fitted up. I have not since then kept trace of that investigation in England, but it is only from what I saw occasion-

ally in the papers that I am speaking. My opinion is that the vessel was well fitted to carry cattle, and that had it not been for the extraordinary heavy gale she encountered she would have carried her cattle all right.

Q. You think there was nothing wrong with the vessel except that she met with exceptionally heavy weather?—A. Yes; that is what I think, together with, perhaps, a want of experience on the part of the captain in the cattle-carrying trade.

This concluded the evidence of the witness.

W. C. MONDERLOH, Agent of the Hansa Steamship Company, of Hamburg, Antwerp and Montreal, gave the following evidence:—

The steamships of the Hansa Line are engaged in carrying cattle to British ports, namely to the Thames, Dundee and Aberdeen.

By Mr. Smith:

Q. What is the size of your steamers?—A. They are from 2,000 to 4,000 tons.

Q. You are then directly interested in this cattle-carrying trade to Great Britain, although your line is a foreign line?—A. Yes. I wish to make the following statement, with your permission, in regard to our line:

"In submitting the annexed statement of mortality on live stock carried per Hansa Line steamers during the last three years, from the port of Montreal, it will be seen that the actual loss on 18,871 head of cattle amounted to .90 per cent., and on 8,817 sheep to only .23 per cent. The SS. "Cassius," as will be seen from annexed statement, lost 146 out of 492 head of cattle. This steamer, which sailed from Quebec on 7th November, was not a proper Hansa Line boat, but was merely chartered for the occasion by the company, whose new steamers were not all ready for service at the time; but we may be permitted to mention here that during the last two years the owners of this line have built six new steamers, all of which have been constructed with a view to make them as perfect and suitable as possible for the carrying of live stock, and have all necessary modern improvements, and the very best machinery for ventilation.

"All the new steamers will be available with the opening of navigation for the Montreal service, and it is confidently expected that the Hansa Line will be even more successful in carrying live stock than they have been heretofore."

HANSA LINE.

Live Stock carried from Montreal.

Years.	Number Carried.		Cattle died.	Sheep died.	Average loss.	
	Cattle.	Ship.			Cattle.	Sheep.
1888.	2,066	3,881	12	120	.58	.31
1889.	6,576	3,112	44	33	.67	.10
1890.	10,227	1,722	115	45	1.67	.26
From port of Quebec "Cassius," chartered ship, 1890.	492	42	146	.....	.....	.....
	18,871	8,715	171	198	.90	.23
	19,361	8,757	317	198	1.63	.23

Percentage for three years:—Cattle, .90 per cent.; sheep, .23 per cent.

Q. Have you anything further to say, Mr. Munderloh?—A. I entirely agree with Mr. Reford, who has expressed the sentiments of all the shipping companies. I have not had the opportunity of hearing Mr. Maclellan's evidence, but I presume he has done the same thing.

Q. You approve of Government supervision over the shipping of cattle?—A. Yes; I think it would be a good thing.

Q. Do you approve of deck loads of cattle being carried in the months of September, October and November?—A. Yes; I think the cattle can be carried safely during all the opening of the St. Lawrence navigation. With the exception of the steamer "Cassius," we never had a serious accident to any of our cattle.

Q. Did she carry many on the upper deck?—A. I think about 200.

Q. And were they lost off the upper deck?—A. We lost 146, but I cannot say if they were lost off the upper deck.

Mr. REFORD.—No, sir; they were not lost off the upper deck.

Q. You do not know whether it was the deck load that was lost or not?—A. I only know that she lost 146.

Q. Do you think that the trade would pay if vessels were prohibited from carrying deck loads in the fall months of the year?—A. It would not pay, especially if the rates on grain were as low as last year.

Q. Are the captains of your vessels experienced in this cattle-carrying trade?—A. Yes; we have only experienced captains on our lines.

Q. Do you think the cattle men should be shipped under the directions of the captain and put on the articles of the vessels?—A. I think it would be preferable.

Q. The steamships have nothing to do with furnishing the hay and feed for the cattle?—A. No; we have not.

Q. You leave that for the shipper of the cattle?—A. Yes.

Q. Suppose some shipper did not put enough hay on, would you watch to see that he puts sufficient fodder on board?—A. Yes.

Q. Who attends to that?—A. I understand the cattle shippers have appointed a person to look after that.

Q. We have heard of cases where some men shipped cattle and did not put enough of food on board for them?—A. On the other hand, I remember that we had 800 bales of hay too much, and we had to carry the hay for nothing.

Mr. REFORD.—There is a reform wanted in that matter also, so as to protect the ship-owners.

Mr. MUNDERLOH.—We have generally found there was too much feed put on board for the cattle, but whether each owner of a shipment got his share of it I do not know.

Q. What becomes of it on the other side?—A. I suppose it is sold by the owners of the cattle to whom it belongs.

Q. But there is no Government inspection now as to whether sufficient fodder is put on board for the animals?—A. No; and I think it would be very desirable that that should be a part of the regulations.

Q. Do you approve of a system by which the ships should furnish the feed to the cattle and find the cattle men, provision them and take charge of all the animals on board?—A. I think it would be well, because the ship could then charge for it, and furnish all the supplies.

Q. You think that would be an improvement?—A. Yes.

Q. Did you ever hear of any cases of cruelty to animals on board vessels?—A. No; on the contrary they have always been very kind to the animals. Sometimes cattle have been brought sick on board, and the officers and men on the ship doctor them up and had them cured before they got to Father Point. They take great care of the animals.

Q. Do you carry cattle on the hatches of your ships?—A. Yes; sometimes.

Q. Do you think it is a good arrangement to do so?—A. Yes; I think there can be no objection to it. The vessels of the Hansa Line are well ventilated, and even if the hatches are closed there is plenty of ventilation.

Q. Do you carry steam fans in your ships?—A. Yes; we have all the latest improvements. We have the Blackman patent ventilator.

Q. On all your ships?—A. On all the new ships.

Q. You are against any restriction that would prevent the carrying of deck loads of cattle during the months of October and November?—A. Yes; I am against it. I think there is no occasion for any such restriction. The last ship of our line that crossed with cattle sailed from Boston in December, and did not lose any of her animals.

Q. Did she carry cattle on deck?—A. Yes.

Q. Did they suffer any from the cold?—A. Not at all.

Q. I suppose that the animals are not taken on board your steamers until all the other cargo is loaded?—A. We never take live stock on board until all the other cargo is loaded, except in very exceptional cases. I believe if a few changes were made with regard to the inspection it would be a very desirable thing. It is the interest of every ship owner and every stock owner, as well as of the insurance companies, to take the best care possible of the animals and to insure their safety and comfort.

Q. Do you think it would be any improvement if freight were paid only on the animals that are landed in England?—A. No; I think it is better the way it is.

Q. I suppose it would practically make no difference, because the steamship owners would charge so much more freight on the cattle if they were paid only for the number landed?—A. Yes; it would come to the same thing in the end.

Q. However, it would give the ship an interest in the safety of the cattle?—A. That is so; but the ships do now take an interest in the safety of the cattle, and the statements show that very few cattle are lost.

Q. How do you account for the fact that the losses of cattle on your line are somewhat greater than on two of the other lines?—A. I think it was because we had not our new steamers ready for the trade this year. As soon as our new steamers will be running I think the losses will be little or nothing. There was a strike on the other side this year, and it prevented the steamers being finished. In the meantime we had to do the best we could, and occasionally we had to charter an outside boat. We are building four new steamers on the Clyde, one in Hamburg and the other in Bremen.

Q. Have you any other suggestions to make?—A. I think it would be very prejudicial to the trade to prohibit the carrying of cattle on the decks during the fall months of the year. These storms which we met with this fall were very exceptional, and it was they caused the losses. In regard to prohibiting the export trade of live stock, if that were done you would not see one of our steamers coming to Montreal.

Q. They could not run here were it not for the live stock trade?—A. No; they could not come here, because it would not pay.

Q. They could not find sufficient freight to pay them otherwise?—A. No.

Q. So that such a restriction would virtually close up a large portion of the trade of the country?—A. Yes.

Q. So far as you know, the trade is carried on without any cruelty to the animals?—A. There is no cruelty whatever to the animals.

Q. Do you think there is any cruelty to carry animals on the upper deck in the month of November?—A. Not at all. I believe that if the animals could make a choice themselves they would prefer to go on the upper deck.

Q. Is it not more dangerous on the upper deck than on the main deck?—A. Not except in storms.

Q. And then they are liable to be washed off?—A. Yes.

This concluded the evidence of the witness.

CHARLES McLEAN, of the firm of McLean, Kennedy & Co., Montreal, agent for the McLean Steamship Company, the Bossière Steamship Company and for transient steamers, gave the following evidence :—

By Mr. Smith :

Q. Are you engaged in the cattle shipping trade to Great Britain ?—A. Yes ; I have been in this trade since the first head of cattle was shipped from this port up to the present time. Last year we carried from this port 16,500 head of cattle, at a loss of about 1·35 per cent. including 162 head of cattle lost on the unfortunate ship the “ Straits of Magellan.” With the exception of the “ Straits of Magellan,” our losses were about .53 of 1 per cent.

Q. That is about the average of the others—about $\frac{1}{2}$ per cent ?—A. Yes ; a little over $\frac{1}{2}$ per cent.

Q. You have heard the evidence of the other gentlemen, have you any suggestions to make with regard to the cattle trade ?—A. Yes ; I have heard the evidence of the other gentlemen. From my standpoint, I know that it is impossible for a steamer to leave this port without the cattle stalls having been inspected and passed as competent to perform the work required from them.

Q. Who inspects the cattle stalls ?—A. The insurance agents ; and if they are not satisfied they can force the steamship agents to bring Dr. McEachran, Veterinary Inspector for the Dominion Government, to pass and approve of them.

Q. Does he inspect them always, or does he only inspect them when there is any dispute ?—A. He only inspects them when he is called upon. I wish to say, also, that no cattle can be shipped from this port in a crowded condition, because no steamer can leave the port unless she has procured the Cattle Inspector’s certificate that ample room has been provided for the animals. Experience has taught the live stock insurance companies that it is safe to carry cattle from this port during the whole of open navigation on the St. Lawrence. There was a time in the trade that the underwriters would not insure stock after the 15th September, but year after year, as experience taught them the safety of the trade, they have extended the time for insuring cattle up to the close of navigation.

Q. Do you speak of cattle carried on the upper decks of steamers ?—A. They insure cattle carried anywhere on the steamer. They will now cover stock on steamers from this port during all the season of navigation.

Q. Will they insure them on the upper deck ?—A. Yes ; they will insure them anywhere they are carried on the steamers.

Q. Do you consider it any more dangerous or any more cruel to the cattle to carry them on the upper deck in the month of November than if they were carried on the main deck ?—A. I do not.

Q. You think the cold weather does not affect the animals ?—A. It does not—that is to say, the cold is not sufficient to affect them. As regards carrying cattle between decks, there is no point of material difference in their situation, except in the point of ventilation, and all cattle vessels should be well ventilated.

Q. Are the transient vessels well ventilated ?—A. Yes ; they are.

Q. In all cases ?—A. There is no “ tramp ” loaded at this port to which first the Cattle Inspector is not called upon to give his opinion as to the requirements for ventilation, and in every instance Dr. McEachran, or Dr. Baker, his assistant, are called to pass their verdict as to whether the ventilation between decks is sufficient.

Q. Have the transient vessels got steam fans ?—A. No.

Q. How do they ventilate then ?—A. By the ordinary ventilators and by “ booby ” hatches.

Q. Do you think that these transient vessels should be prohibited from carrying cattle unless they have steam fans ?—A. No, sir ; I do not. I hold that with “ booby ” hatches a vessel can be ventilated and can carry cattle safely from this port to Liverpool with her ordinary hatches down.

Q. Have you read the accounts of steamers having their hatches battened down, and which were not supplied with steam fans, and how they discovered when they

opened the hatches that many cattle were smothered in the holds?—A. I have made the assertion, to begin with, that all vessels carrying cattle should be well ventilated.

Q. If the hatches were battened down how could they be well ventilated, unless there were steam fans to circulate the air?—A. I say that “booby” hatches can ventilate well.

Q. What is a “booby” hatch?—A. It is an erection placed at the end of each hatch, having a connection with the lower deck, and rising 5 feet above the deck, and having two openings—one opening each way. In case of a storm one door is shut and the other open. In that way any steamer can be well ventilated which carries cattle across the Atlantic with all her hatches battened down.

Q. Then, why are they putting in steam fans in most of the regular lines of steamers to insure the safety of the cattle?—A. These vessels might as well put in steam fans, because they are likely to be in the trade for many years. They are in the regular cattle-carrying trade, and they can put in steam fans; but that is no reason why it is not possible for other vessels to ventilate otherwise.

Q. Do you consider it necessary that vessels should put in steam fans at considerable expense to insure the safety of the cattle?—A. The expense is not very much.

Q. Then what would be the hardship of compelling all vessels carrying cattle, to have steam fans?—A. The hardship would be that, perhaps, a first-class vessel coming to this port would not put in steam fans to carry cattle for one trip, but she might be equally well able to carry cattle as any vessel having steam fans.

Q. If she were not properly fitted up for the cattle trade, would it not be better that she should take some other cargo?—A. It is impossible for a vessel to leave this port without inspection by the proper officers, and the officer appointed for this purpose is the only one competent to say what are the requirements for sufficient ventilation for each steamer.

Q. Were you agent for the steamer “Straits of Magellan”?—A. I was.

Q. What kind of a vessel was she?—A. She is classed A-1 100 at Lloyds, and that covers all the ground as regards the description of the vessel. As regards the fittings on that steamer, they were put up in the usual way, under the inspection of the insurance agent and the cattle inspector. In fact, the fittings were put up stronger than usual, on account of her leaving here on the 2nd of November; and judging from our past experience, but for the extraordinary heavy weather that happened on the Atlantic on the 7th and 8th of that month she would certainly have landed her cattle on the other side in first class condition, as she had done on two or three trips before. This was her fourth trip during the season, and the losses of the “Straits of Magellan” in the three voyages previously were only 7 head of cattle altogether.

Q. Is she a spar-decked ship throughout her whole length?—A. She is a spar-decked ship, without any well.

Q. How many cattle had she on deck?—A. She would have about 250 or 260. She is a large steamer.

Q. Where did the losses occur—were they on the upper deck?—A. Partly on the upper deck and partly underneath.

Q. Did they write to you about the losses on the “Straits of Magellan”?—A. They wrote out to say that the severity of the weather caused the hatches to be battened down for 56 hours.

Q. When they went down below, after the hatches were opened, in what condition did they find the cattle?—A. I cannot say as to that.

Q. Do you not think that if they had steam fans the cattle would not be injured down below?—A. The fans might be knocked out of order, the same as anything else, by the heavy weather.

Q. What number of cattle had the “Straits of Magellan” on board?—A. Six hundred and forty head, I think.

Q. Have you any suggestions to make with regard to improvements in the cattle-carrying trade, or do you think everything should be allowed to remain just

as it is?—A. I do not think I have any suggestion to make, other than those already made by gentlemen in the trade who have given their statements. I think they pretty well cover the ground.

Q. You agree with the other steamship agents who have given their statements?—A. Yes.

Q. Do you think the trade should be left as it is, without any change?—A. I do not think you can change it very much with advantage to anybody. Probably the inspection might be made more exact than it is now, but that is a matter of detail. The general trade should be left to remain as it is.

Q. You approve of Government inspection?—A. Yes.

Q. And you approve of the trade being allowed to be carried on as it is, with the difference of having Government inspection?—A. We have Government inspection now.

Q. There is no Government inspection with reference to the fittings and to the carrying of the deck load. The present Government inspection relates only to the health of the animals, and whether there is sufficient space to carry the number put on board?—A. I take it that that makes a Government inspection as to the stalls in which the animals are placed. There has been Government inspection of the stalls since the second cargo of cattle was shipped from here. Neither the Government nor anybody else outside of those immediately interested knew anything about the first cargo that was shipped from here. Since the Veterinary Inspector was appointed he has supervision as to the stalls and the space occupied by the cattle.

Q. And if the space for the cattle was too small he would object to it?—A. Exactly so. He has made me take off some of the cattle on board ship.

Q. That is when you wanted to give them inferior stalls?—No, sir. It is impossible to give them inferior stalls.

Q. Did you want to crowd too many on board when he ordered them ashore?—A.—No, sir; not in my opinion. But, on the other hand, he has often said to me: "You might put four or five more animals down there between decks. It would hold them perfectly well and very comfortable. There is plenty of space."

Q. Do you think that the transient steamers are just as good as the regular liners for carrying cattle?—A. Yes, sir; the record shows them to be so. The ordinary record of the transient steamers shows only a loss of 53 per cent., and I may point out that the "Straits of Magdellan" was a line steamer, and she lost 161 head of cattle.

Q. Then you are in favour of the transient vessels continuing in the trade?—A. Certainly I am. I make my living partly from them, and they are just as good as the line vessels for carrying cattle.

Q. You consider them as good as regular line vessel for carrying cattle?—A. As long as a steamer is classed 100 A-1 at Lloyds no person can say anything against it, and she is just as good as any other vessel.

Q. Are the fittings on the deck every carried away?—A. I have heard of part of the deck fittings being carried away.

Q. And the cattle carried away with them?—A. Well, I have heard nothing as to that.

Q. Do you suppose the cattle went with the fittings?—A. I naturally would suppose that the cattle went also.

Q. Have you any suggestions to offer as to what Government regulations should be made in connection with this cattle trade?—A. I have nothing further than what has been already said by those who have given their evidence before me. The details would be a matter for consideration by the Government and by the parties interested in the trade.

Q. Do you approve of cattle being carried on the hatches of the steamers?—A. I do.

Q. What is your reason for that?—A. I approve of cattle being carried anywhere, the Cattle Inspector says it is safe to carry them as regards breathing and ventilating space.

Q. When you refer to the Cattle Inspector, do you mean Dr. McEachran, the Government Veterinary Inspector?—A. Yes.

Q. He is not a cattle inspector for the ship: he is only inspector as to the health of the animals. He is not a sea-faring man, experienced in the trade?—A. But he would not allow anyone to carry cattle anywhere on the steamer which was not suitable for them.

Q. You approve of cattle being carried on the hatches?—A. Yes; I approve of cattle being carried any part of the ship where he allows them to be carried.

Q. But he has only power to inspect as to the health of the animals?—A. If there are too many cattle on the ship he can order them ashore at any time.

Q. Do you think that any examination of the captains of steamships as to their experience in the cattle-carrying trade is necessary?—A. When I have anything to do with steamers carrying cattle, if the captain has little experience in this trade I always give him instructions as to certain rules and regulations which he should follow.

Q. Do you consider it necessary that evidence should be produced that the captain of a vessel has experience in carrying live stock before he is allowed to proceed to sea with cattle on board his ship?—A. I think that would be necessary, and that it would be for the benefit of all concerned.

Q. Have the captains of any of the transient vessels consigned to you come here without experience in this cattle-carrying trade?—A. Yes; in one or two cases.

Q. And how did the cattle get along on board of their steamers?—A. In one case very well.

Q. What was the other case?—A. I had no report from the other case, but he must have done well, as is evidenced by the returns I have given you.

Q. In that case, were there any losses?—A. There was no loss in the case of one captain that I have referred to.

Q. What was the name of the captain in the other case?—A. It was the captain of the "Carthagenia."

Q. Was that the captain that had no experience in the trade?—A. Yes; and he lost nothing.

Q. What was the other case?—A. I cannot remember it just at the moment, but I will refresh my memory when I go back to the office.

Q. Who superintends the fitting up of the cattle stalls on your vessels?—A. The firm of John Lee & Co. build our stalls.

Q. And who prescribes the mode of fitting and space to be allowed each animal? A. The Cattle Inspector's Law requires the space to be 2 feet 8 inches.

Q. But we have evidence to-day that the space allowed is only 2 feet 6? A. The Government law is, I think, that it should be 2 feet 8. We believed that to be wrong and I think that 2 feet 6 is sufficient space.

Q. How is it that some of the steamers allow only 2 feet 6?—A. That is in the discretion of the Cattle Inspector, who gives his opinion on the space in connection with the size of the cattle.

Q. Do you think that 2 feet 6 for each animal is sufficient space?—A. It is quite enough for the size of any cattle shipped from this port.

Q. That would enable all the animals to lie down at the same time?—A. Yes; I believe it would, but I have never seen all the animals lying down at the same time. I have seen two out of four lying down, but I think they could all lie down with comfort. I cannot speak with certainty as to that; I have had no experience.

Q. Do you think that if a number of cattle are stalled together with a 2 feet space for each they could all lie down at the same time?—A. I do not think they could all lie down with comfort, but every second animal could.

Q. Then the other one would have to stand up?—Yes.

Q. Would it be any hardship to the cattle if they could not lie down all at the same time?—A. I think not. I have myself crossed the Atlantic to gain experience in this trade, and I have seen the cattle on board taking their watch and watch, the same as the men. Some laid down for a few hours and then got up, and then allowed their neighbours to lie down. They did this regularly during the whole passage.

Q. They could only lie down, then, by taking turn about?—A. They laid down in pairs out of four.

By Mr. Greenshields:—

Q. That is when the cattle have only 2 feet space?—A. I refer to large cattle occupying a 2 feet 6 inch space.

By Mr. Smith:—

Q. Do you think 2 feet space is too small for “stockers”?—A. I think it would be a very comfortable space for them.

Q. But they could not lie down all at the one time?—A. I have not had the experience to know whether they could or not.

Q. Did you ever cross in a cattle ship?—A. I did.

Q. How often?—A. Three or four times.

Q. Did the cattle suffer any inconvenience or cruelty during the voyage?—A. Not to my knowledge.

Q. How did the cattle men attend to the animals?—A. Very well. The foreman happened to be a good man, and the cattle men did their business well.

Q. The cattle men were not green hands at the business, were they?—A. They may have been as far as any information I have is concerned, but their work was done well, and I know that because I made it my business to see to it.

Q. Do you think that the upper deck should be fitted with iron frames?—A. I do not—not necessarily.

Q. You think that wooden houses are good enough?—A. Yes; wooden houses with stays are good fittings.

Q. How was the “Straits of Magellan” fitted up?—A. With wooden houses and stays.

Q. Do you not think it would be better if the houses were fitted on iron frames?—A. I do not think so.

Q. Do you think there should be a Government inspection as to the quantity of hay and feed put on board ship for the cattle?—A. I think that should be a part of the Government inspection.

Q. Do you think the Government should inspect the number of cattle men provided to attend the cattle?—A. They might or they might not. That is matter that would regulate itself.

Q. It might regulate itself in this way, that if the cattle were not attended by a sufficient number of competent men they might suffer?—A. We know that one fairly good man to every 25 head of cattle is sufficient for the work. The Government might dictate as to that.

Q. It is not for the purpose of dictating that I am here. I want to get the opinion of the trade as to what is necessary to conduct the cattle trade more safely. I asked you the question, if you thought the Government would make it a part of their instructions to see that there were enough capable cattle men on board each ship to take care of the cattle?—A. I do not think it necessary that they should have any inspection in this particular.

Q. You would leave that to the ship and to the shippers of cattle?—A. Yes; I would do so.

Q. If there should be any Government inspection what points do you think it should extend to?—A. I think that the Government Inspector's duty should be to see to the ventilation, that there is sufficient room for the cattle, and that the stalls are fitted up in proper condition. I think that would nearly cover the whole ground.

Q. And it would not extend to the attendance on the cattle?—That might be included, but it is not essential.

Q. You think the inspection should include the ventilation, the space and the fitting of the stalls?—A. Yes; that is all, so far as the carrying trade is concerned.

Q. Of course they will continue to inspect the cattle, as to disease, and so forth?—A. Yes; that is another branch of the business altogether.

This concluded the evidence of the witness.

JOHN POPHAM, of the City of Montreal, Manager of the Montreal Lloyds, Marine Underwriters, and of the Marine Underwriters' Association of Liverpool, and President of the Montreal Board of Marine Underwriters, gave the following evidence:—

By Mr. Smith:

Q. Mr. Popham, you insure cattle going across in these steamers?—A. I have done so for the past fourteen years. I am one of the oldest, if not the oldest, writers of cattle against marine mortality. When we waited upon you, sir, in Ottawa, some time ago, you may remember we laid before you a number of suggestions which we thought would be an improvement in the mode of shipping cattle, and which we believed would remove all legitimate objections to the shipment of live stock and cattle to England. These recommendations I beg now to submit to this enquiry as follows:—

Copy of underwriters' recommendations.

It is recommended that the Government appoint a thoroughly competent, independent sea-faring man, who has had several years' experience with live stock at sea, and has made a successful record while in charge of vessels carrying live stock from this continent to Great Britain, and who is thoroughly acquainted with the requirements of the trade, whose duty it should be to inspect every steamer on which it is proposed to carry live stock, and determine whether she is a proper vessel for such business, and no vessel shall be allowed to carry cattle that has not been passed by him, for which a certificate has been issued by him, stating how many cattle and sheep he considers may be safely carried on each deck.

He is not to pass any vessel for live stock, unless she is equipped and built as follows:—

1. Should be at least 7 feet 3 inches high between decks.
2. Should be provided with steam fan or fans of sufficient capacity to force fresh air between the decks in quantity ample for all the animals that can be placed on said deck or decks.
3. Should have a sufficient number of "up-take" ventilators.
4. Should have a condenser of sufficient size to provide water for all animals that are allowed to be carried, whether steamers are provided with water ballast tanks or not.
5. Should have angle-iron frames, fitted from side to side on top deck, 3 feet apart, on all steamers carrying a deck load of cattle, to be boarded in with 2-inch planks.
6. Steamers should be at least 1,200 tons net register.
7. Steamers should have at least 250 horse power.
8. Should have a sufficient number of water barrels and hose conveniently placed.
9. Space to be allowed for each animal should not be less than 2 feet 8 inches by 8 feet, it being understood that five stockers may be loaded in the space of four fat cattle, and not more than ten sheep, equal to one fat ox—it being understood that "stockers" are animals weighing not over 1,000 lbs.
10. No hay or other feed to be carried on deck, but in every case should be stored under deck in a convenient place.
11. No head ropes under $\frac{3}{4}$ inch in diameter to be allowed.
12. That no distillery cattle for shipment be allowed on the wharf between 8 a.m. and 6 p.m., and all loading of said cattle to be done between 6 p.m. and 8 a.m.
13. Live stock not to be loaded on any steamer until the loading of the cargo has been completed.
14. A sufficient number of competent attendants should always be provided, and that these men be obliged to sign the ship's articles, and be under the authority of the captain.

15. All steamers carrying cattle should have on board at least three barrels of oil, for use in heavy weather.

16. We suggest that all steamers carrying live stock be lighted with electric light.

17. In fitting up stalls, passages should be left, so that the scuppers can be reached and be kept clean.

18. Cattle to have at least twelve hours rest after leaving cars before they are put on board.

19. There should be a union stock yards, having a wharf of its own, from which all live stock should be shipped.

20. That no steamer can get her Customs clearance until this Government Inspector gives his certificate that the cattle are loaded and the steamer equipped in accordance with his requirements.

(Signed) JOHN POPHAM,
President Marine Underwriters.

JOHN H. ROUTH.

E. L. BOND.

JAMES RILEY.

Our first recommendation is, that the Government should appoint a thoroughly independent and competent sea-faring man, who has had experience with live stock, &c., and that no vessel shall be allowed to carry cattle that has not been passed by him, and for which a certificate has been issued by him, stating how many cattle, and sheep he considers may be safely carried on deck. I wish now to emphasize, possibly a little more distinctly than it was done during the examination this morning, the necessity for the appointment of this officer. You are aware, sir, that in 1872, when some amendments were made to the law—and very important and useful amendments they were—as to the loading of grain cargoes, port wardens were appointed to regulate the quantity of grain in bulk and in bag which should be carried by each vessel, and as to how the fittings for grain cargoes should be made?

MR. SMITH.—Yes; I remember that very well; I had something to do with it.

MR. POPHAM—Then, sir, the duty of the port warden is limited in that respect to vessels carrying grain cargoes, as I understand by the Act. He has no jurisdiction at present to state whether a vessel is fitted to carry live stock or not. A vessel may be seaworthy but yet unfitted to carry live stock, and this is now beyond the duty of the port wardens to determine. The duty of the veterinary surgeon appointed by the Government, Dr. McEachran is limited to the ascertaining of the cattle being in good health and as to what space should be allowed to each animal. We think that no officer so far appointed has the power to determine whether a vessel is fitted or not to carry live stock, and as to how and where the cattle should be placed on board. We wish to have an officer appointed, who shall have these powers and that is the object of our first recommendation.

Q. If you think it is necessary to have an officer of that description, could not the port warden, who now examines the seaworthiness of the vessel as regards the carrying of grain, superintend the loading of the vessel with live stock after the grain has been put on board. Instead of multiplying officials, could not this power be put in the hands of one responsible officer?—A. You mean to say that the port warden should determine whether the vessel is fit to carry stock?

Q. Yes; a man who is fitted to determine whether a vessel is seaworthy to carry a cargo of grain ought to be able to say whether she is seaworthy to carry cattle?—A. Not necessarily so. A vessel may be perfectly fitted to carry grain, but not fitted to carry cattle.

Q. Would the officer not be competent to determine whether a vessel is seaworthy either for carrying grain or for carrying cattle, or for carrying both?—A. She may be seaworthy, but not fit for carrying cattle. At the same time, while I make these

remarks I should be sorry to say that the port wardens of Montreal, both of whom are most competent men, are not fitted to make an inspection of cattle vessels. Without any reflections on the ability of Capt. Morrison or Mr. Shaw, both of whom I have the very highest respect for, as far as their abilities to carry out their present duties are concerned, I may say to be frank, that neither of them, to my knowledge, have been engaged in the cattle-carrying business, and I prefer an official who has experience in the cattle-carrying trade to determine whether a ship is fit or not to carry live stock.

Q. In other words, you would have two inspectors for the vessels—one, the port warden, to discharge his present duties, and the other to inspect vessels as to their fitness for carrying cattle?—A. Yes; I think there should be a separate official to inspect as to the fitness for the vessel to carry cattle and as to what portions of the vessels the cattle should be carried on.

Q. You think the present machinery connected with the port warden's office, which is under the supervision of the Board of Trade, is not sufficient to carry on all this work?—A. I think the work would be better done if a special inspector were appointed to look after the cattle-carrying trade.

Q. You think it is not sufficient that all the inspection of the vessel should be in the hands of one officer?—A. I think it is not sufficient. I think there should be an officer for cattle inspection, in addition to, or in connection with the port warden's office.

Q. And you think this should be put in the shape of regulations by the Government?—A. Yes; there should be Government regulation on this point. The underwriters further recommend that the space on a cattle-carrying vessel should be 7 feet 3 inches high between decks, and that they should be provided with a steam fan or fans of sufficient capacity to force fresh air between decks in quantity ample for all the animals that can be placed on said deck or decks. One of the steamboat agents examined here recently, gave evidence that he did not consider steam fans necessary. In opposition to that, I may state that I consider steam fans absolutely necessary on every boat carrying cattle.

Q. And you consider that any other plan or device for ventilating purposes is not sufficient?—A. Yes; I consider that the steam fans are the only things which can give sufficient ventilation.

Q. Would you not consider that that would shut out some of the transient vessels from the trade?—A. Well, sir, let it do so. Better to shut out the transient vessels than to have losses of cattle.

Q. I suppose that if these "tramps" come here looking for freight, there are other cargoes they could get, if they were not properly fitted up for cattle?—A. Yes; I presume they take cattle because it pays them better than other freight. The underwriters next recommend that all cattle vessels should have a sufficient number of up-take ventilators. We have been informed that while some vessels are supplied with down-take ventilators to draw in fresh air from above, there has been an insufficiency of up-take ventilators to carry off the foul air.

Q. Would you have that provided for in Government regulations?—A. Yes; there should be Government regulations with regard to that. We also recommend that each vessel should have a condenser of a sufficient size to provide water for all animals that are allowed to be carried, whether steamers are provided with water ballast tanks or not.

Q. It is generally conceded, I think, that each vessel should have condensers of sufficient size to provide fresh water?—A. Yes.

Q. Are the vessels provided with these condensers now?—A. Yes.

Q. Transient vessels and all?—A. Yes; I believe so; for if they were not we would not pass them. I think they are all provided with condensers. We further recommend that all vessels should have angle-iron frames, fitted from side to side on top deck, 3 feet apart, to be boarded in with 2-inch planks.

Q. Do you consider that the present plan of having inch boards only is not sufficient?—A. I do not think they are sufficiently strong,

Mr. JOHN ALLAN.—Suppose you put up these iron angle frames and 2-inch boards, how are you to get the rest of the cargo out of the ship?

Mr. POPHAM.—It is not for us to consider.

Mr. ALLAN.—It is a question for the shipowners to consider?

Mr. POPHAM.—The question with us is, in regard to the cattle that we insure. The underwriters suggest that steamers carrying cattle should be at least 1,200 tons net register. That is the opinion of the underwriters, but my individual opinion is that vessels carrying cattle should be at least 1,500 tons.

Mr. ANDREW ALLAN.—Why my good sir, we have carried cattle safely in sailing ships of less than 1,000 tons.

Mr. POPHAM.—Would you carry them in November and December and with such gales as we have had recently.

Mr. ANDREW ALLAN.—Yes.

Mr. POPHAM.—I would not insure them at 90 per cent.

Mr. ANDREW ALLAN.—Well, then somebody else would insure them.

By Mr. Smith:

Q. You give it as your opinion that cattle-carrying vessels should not be less than 1,200 tons?—A. I am speaking as the mouthpiece of the underwriters when I say that they should not be less than 1,200 tons, but my individual opinion is that they should not be less than 1,500 tons. We also recommend that the space allowed each animal should not be less than 2 feet 8 inches by 8 feet, it being understood that five "stockers" may be loaded in the space of four fat cattle; and not more than ten sheep equal to one fat ox, it being understood that "stockers" are animals weighing not over 1,000 lbs. I may mention that originally, when this trade was in its inception, this was the usual space allowed to each animal, both here and in the United States ports, but it has gradually been reduced to 2 feet 6 inches, and I have heard of a case where the space has been brought down to 2 feet 4 inches.

Q. Was that for fat cattle?—A. Yes. It is the opinion of the Board of Underwriters, in which I entirely concur, that the minimum space should be 2 feet 8 inches for each fat animal.

Q. And five "stockers" in the place of four fat cattle?—A. Yes. The underwriters further recommend that no distillery cattle for shipment be allowed on the wharf between 8 a.m. and 6 p.m., and all loading of said cattle to be done between 6 p.m. and 8 a.m. As you are aware, sir, distillery fat cattle are much more tender than grain or corn-fed cattle. They usually come down here between June and August, when the weather is very hot, and are exposed on the wharf to the sun, a fact which has proved in the past, and is likely to prove in the future, exceedingly disastrous to the animals. They cannot stand exposure under excessive heat, and therefore we wish that these limitations as to the time for loading distillery cattle should be in force. The underwriters also recommend that a sufficient number of competent attendants should always be provided, and that these men be obliged to sign the ship's articles, and be under the authority of the captain. I was pleased to hear you say this morning, (and I only heard of it previously a few days before,) that it was a regulation which has been some time in force by the English Board of Trade under the Imperial Shipping Act, that these cattle men should be on the ship's articles. I made some inquiries as to why this rule had not been observed in Montreal, and the shipping agent told me that they did not do it, because they did not feel called upon to do it, and as it involved the payment of a fee of 2 shilling, to the shipping master of this port for every man so registered on the ships' articles. I think I am speaking for the underwriters, as well as for myself, when I say, that for the sake of having this important matter carried out the underwriters would be willing to reimburse the shippers of cattle that 2 shillings for each man so entered on the ship's articles. For twenty men on board a ship, it would amount to only \$10. I have heard captains of vessels complain to me, and I believe with very good reason, when I consulted them about the losses on their vessels, of the inefficiency of some of the men who went in charge of cattle,

I know that some of those captains were most careful men, and when I expressed my surprise about the losses they said, no doubt with a good deal of truth, that the men employed to take charge of the cattle were not competent for the work. I do not think that is a universal complaint, but there are cases, to my personal knowledge and to my own cost, where men have been picked up to take charge of cattle who were utterly unfit for the purpose, and when they were remonstrated with by the officers of the ship they paid no attention, simply because they knew the officers had no control over them.

Q. And if they had signed the articles they would have been under the discipline of the ship?—A. Yes.

Q. And they would be obliged to do whatever work they were ordered to do?—A. Yes. The underwriters also recommend that cattle vessels should carry oil for use in very heavy weather; and I believe the utility of that was admitted by that gentleman who represented the shipping interest this morning. We recommend also, amongst other things, that there should be a union stock yard at Montreal, having a wharf of its own, from which all live stock should be shipped. This suggestion, I believe, is a very practical and useful one, and would prevent a great deal of injury to the animals before they are put on board the ship. Not many months ago, when returning from the Bonaventure Depot, about half-past two in the afternoon, my cabman took me along the wharf, as there were some excavations being made on St. Paul street, and I saw there about 200 or 300 cattle on the wharf. There were quite a number of vehicles passing through the cattle, and I noticed, with no little pain, that the drivers of the vehicles, drove amongst the animals, bruising and cutting them, and knocking them about as if they were so much rubbish. I am informed that this is not an unfrequent occurrence, and that much suffering is endured by the animals from this cause. Were there a union stock yard, and a wharf specially devoted to the shipment of cattle, these grievances would be to a large extent, if not altogether, removed. The underwriters also recommend that no steamer can get her Customs clearance until the Government inspector gives a certificate that the cattle are loaded and the steamer equipped in accordance with these requirements. This recommendation we also deem to be very important. You are aware, sir, that a port warden's certificate is necessary for any grain vessel leaving the port, and we deem it equally necessary that she should not leave port until she has a proper certificate as to the accommodation for the cattle. Now, sir, so far I have confined myself to the suggestions made by the Board of Underwriters. Mr. Reford suggested this morning that the men sent in charge of the cattle should be engaged by the ship's agent. I do not quite approve of that myself. I think that the cattle shippers themselves are better qualified to select suitable men than the ship, and I for one, speaking individually now, should prefer to leave the appointment of the foremen and others in charge of the cattle to the owners of the animals. A gentleman who has also been recently examined stated to you that he approved of cattle being loaded on the hatchos. I am very strongly opposed to any such practice. I should like to say now a word or two in regard to these "tramps" or transient vessels. I am speaking for myself, and not for my brother underwriters, when I say that I should like to see some restrictions made with regard to the "tramps." I should prefer to see many ships which have been carrying cattle in the fall of the year altogether out of the business, while I admit that there are tramps which have been very fair cattle carriers. I should like to see deck loads restricted to regular line vessels after the 1st of October. It must be borne in mind, (and I am sure all who have had any experience in this trade will agree with me), that however well fitted a vessel may be to carry cattle, or however carefully she may be loaded, the safety of the animals in the fall of the year very largely depends upon the experience of the captain and officers of the vessel and the care taken by them of the cattle. Mr. McLennan gave us an illustration on this point this morning, respecting the voyage of the "Lake Winnipeg." He described the tempestuous weather she encountered and reported how, on two or three occasions, the captain slackened the speed of the vessel and lay to during the storm. I have known myself careful and

experienced captains to go a considerable way out of their course in order to save the animals. It can scarcely be expected that the captain of a transient steamer, who has little or no experience in carrying cattle, can exercise the judgment necessary to protect the animals in heavy weather. It is often the case that the captain of one of these vessels comes here for the first time, and is not sure whether he will ever come here again. He has not carried cattle before, and does not know whether he will ever carry any cattle again. What he chiefly thinks about is to make as rapid a voyage as possible and to save as much coal as he can to the owners, irrespective of the lives of the animals, as he knows that the freight will be paid on them whether they are landed dead or alive. I think that is all I have to say on the subject.

Q. How would you distinguish between the vessels of the regular liners and the "tramps"?—A. They are very easy distinguishable, sir. The vessels of the regular liners belong to the companies under which they sail. For instance, the vessels of the Allan Line belong to the Messrs Allan, and the vessels of the Dominion Line to the Dominion Steamship Co. There are vessels—and I make no exception to them—occasionally chartered by some of the regular lines, and I would deal with them as I would deal with any other "tramp." I would deal with them on their merits. I do not wish to exclude them, but I would deal with them on their merits. If they are fitted to carry cattle let them carry cattle, but if they are not fitted to carry cattle, exclude them. The underwriters know pretty well the vessels that are regarded as "tramps" and the vessels that are considered as regular liners.

Q. What is the meaning of a "tramp"?—A. A "tramp" means a vessel that runs about to all parts of the earth seeking for freight, and she trades between no two particular ports. A regular liner is a vessel which trades between Montreal and Liverpool, and Montreal or Glasgow, or some two particular ports during the whole season. On the St. Lawrence we have vessels that trade here year after year during the summer months, and which go elsewhere in the winter season.

Q. But if a first-class steamer came here, which had never been here before, would the fact that she had never been here before induce you to call that steamer a "tramp"?—A. Yes, certainly. If she was a "tramp" I would treat her as a "tramp," and the question would then be as to the fittings she has for carrying cattle and the experience of the captain.

Q. Then you would recommend that transient vessel should not be treated as regular liners?—A. Certainly, sir.

Q. Would you recommend that regulations should be made for them different from the regulations for the regular liners, and that they should not be allowed to carry cattle on deck after the 1st of October? I understand that this is your suggestion?—A. Yes; that is my suggestion.

Q. Would you include amongst transient vessels a vessel chartered by a regular line to take the place of one of their own boats?—A. I would.

Q. You would not call such a vessel a regular liner?—A. Certainly not.

Q. The mere fact that it was chartered by a regular line, and loaded by the line, would not be sufficient to change the character of the vessel?—A. No, sir. There has been a suggestion made to me with which I agree. I would make one qualification with regard to transient vessels—that is, a vessel that has been a regular cattle carrying boat, belonging to a line running from New York or Boston, and if she were taken to Montreal I should be disposed to regard her as a regular liner.

Q. Do you think that it is not necessary to prohibit the carrying of live cattle on deck, during the winter months from Halifax or St. John, after the navigation of the St. Lawrence is closed? Of course, we have no control of the cattle shipped from Boston, Portland or New York during the winter months. But do you consider that transient, as well as regular liners, should be prohibited from taking cattle on the upper decks during the winter months?—A. I have no objection to it. But I consider that the vessel should be loaded according to the suggestions which the underwriters have made.

Q. You see no objection to carrying cattle in the middle of winter?—A. No; I do not. I have been on board vessels carrying cattle during the winter season.

Q. Did they carry cattle on the upper deck?—A. Yes.

Q. Did they carry cattle across to the old country?—A. Yes.

Q. And how did they fare?—A. I should think that upon that occasion they were better cared for and looked after than most of the immigrants.

Q. Did they suffer from the cold upon the upper decks?—A. No; but I believe cattle have suffered on the upper deck. I should prefer, however, to see the stalls covered in. I should think that it is only for a very limited period that they are likely to suffer from cold, and then that would be during exceptionally cold weather.

Q. Would you recommend that no restrictions should be placed on carrying cattle in the winter months on the upper deck?—A. If the accommodation for the cattle is properly fitted up, according to the recommendations made, I think there would be no objections.

Q. Would you insure them on the upper decks during the winter months?—A. On a good vessel, carefully loaded, I certainly would.

Q. But, I suppose, at a higher rate of insurance?—A. Oh, certainly.

Q. Did you take a line of insurance on the "Straits of Magellan"?—A. No, sir.

Q. Were you asked to take insurance on her?—A. I was asked to take a re-insurance on her.

Q. Did you decline?—A. Yes, sir.

Q. Did you think she was not a suitable vessel for cattle?—A. I did not think her a desirable risk at that time of the year.

Q. She would be one of the vessels that you would exclude from carrying cattle after the 1st of October?—A. Yes, sir.

Q. Did you consider that she was not sufficiently fitted up?—A. I do not want to make any reflections on my brother underwriters. They may be right and I may be wrong.

Q. You have seen an account of the losses that took place on the "Straits of Magellan"?—A. Yes; I have heard of that.

By Mr. Greenshields.

Q. It has been stated, Mr. Popham, that in the event of an animal being maimed, or having its legs broken, while on the passage across the ocean, the insurance would not attach to it if it were killed by those in charge of it?—A. The insurance would attach.

Q. So that any statement made that an animal must die by natural process in order to recover the insurance is not true?—A. We presume that the animal is maimed by a peril of navigation and she cannot be landed alive. The maimed animals are killed on the voyage to prevent them from suffering, and we pay insurance on these animals.

Q. Suppose, when a vessel is half way across the Atlantic, an animal's back or its legs are broken, and it is put to death by those in charge, would or would not the insurance companies be liable?—A. They would be liable.

Q. You state positively the insurance company would be liable in such an event?—A. Yes, certainly; it would be regarded as a loss by peril of navigation.

Q. There has been a book published by Mr. Plimsoll, in which the following statement is made: "The reason that these animals, no matter how horribly mutilated, sick or suitering they may be, are not put out of their misery, is to be found in the imperative rules of the insurance companies, both in New York and London. They have made it compulsory, under pain of forfeiture of insurance, that no cattle shall be killed, no matter how maimed, injured or suffering. The cattle must die a so-called natural death on board ship, and I must sign a certificate to that effect before the carcass can be thrown overboard. It is stipulated by the insurance companies that every effort shall be made to land every head of cattle alive at Deptford, no matter what their condition. For failing this, the company will refuse to pay

the insurance. Should the man in charge kill an animal suffering intense agonies from broken legs, back, horns or sickness, it would be my duty to report the case, and the insurance would not be paid. It used to be the practice, up to two years ago, to have butchers on cattle ships to skin the dead animals before throwing them overboard. The skins and horns were brought ashore as evidence. The shipowners, however, entered such a remonstrance on the subject, owing to the complaints of passengers, and the horrible condition in which the ships naturally were left, that this has now been stopped." Now, as a fact, is that statement true?—A. Not to my knowledge.

Q. If it were true would you know about it?—A. Yes; I would know.

Mr. SMITH.—Is that quoted from an American work?—A. No; it is an English work.

Mr. PLIMSOLL.—That statement is contained in a book which I published, but it is a quotation from a letter published in the *London Echo* by a gentleman named Corcoran, I think, from the United States. That which you have read is a quotation from a letter in the *London Echo*, and I have given it as a quotation, and not as my statement.

Mr. GREENSHIELDS.—The trouble is, that people reading those books which are distributed broadcast over the country, do not stop to look where these quotations come in. It is published in your book, and is given as your authority.

Mr. PLIMSOLL.—It is not my statement, sir. It is a statement of another gentleman, and it is published as a quotation in that book.

Mr. GREENSHIELDS.—It is published for you by Kegan Paul, Trench, Trubner & Co., of London. It is entitled "Cattle Ships." Being the first chapter of Mr. Plimsoll's second appeal for our seamen, published separately and out of its turn because of its pressing urgency, not published before, lest my case should be deemed incomplete. That is the title page of your book, Mr. Plimsoll.

Mr. SMITH.—If that statement is a quotation, it should not be attributed to Mr. Plimsoll.

Mr. GREENSHIELDS.—I suppose Mr. Plimsoll will admit that this is his book?

Mr. PLIMSOLL.—I have not seen it, but I suppose it is one of the copies of the book.

Mr. GREENSHIELDS.—Then at page 54 of this book is the following statement: "On several occasions I saw the men put paraffin oil into their ears, which, as soon as it reaches the brain, caused the poor brutes to fairly shriek with pain. Occasionally the ears were stuffed with hay, which was then fired; while in many instances the tails were snapped in the endeavours of the cattlemen to force the animals that had lain down from sheer exhaustion to regain their feet. The commander of the vessel was appealed to, in the hope that he would order a cessation of these cruel practices.

"I am well aware" he said "of the cruelties practised on cattle in transport from New York to London, and I will say at once that you see less of it on this line of steamers than on many of the other ships, for a very simple reason that our steamers are better adapted for the business. I am, however, powerless to interfere in the matter. My duties are simply to carry out the instructions of my employers, the cattle being regarded by me as but freight, nothing else."

Q. Mr. Popham, do you believe that any cattle ever shipped from this country were ever treated in that way?—A. I do not believe it. It would be against the interest of every person concerned to treat animals in that way. I do not believe such a thing was ever done.

Q. And it is not the practice of insurance marine underwriters in this country to refuse insurance on any animal which may be killed to prevent it from suffering on the voyage?—A. It is not the practice, and I never heard of it being the practice. Wherever an animal has been so injured that there is no probability of its being landed alive we think it an act of humanity to kill it at once, and all that we stipulate is that the animal so being killed is skinned, and the horns and hoofs preserved, and the flesh, if possible, for the benefit of the underwriters. As regards

the statement that the ships have objected to animals being killed on board, I can give a direct contradiction to this, because I have received during the last three or four months several salvages on animals which were killed on board ships which sailed both from Canadian and United States ports.

Q. And you have a knowledge of the practice of the marine underwriters in the American as well as Canadian ports?—A. Yes; I write cattle from American ports during winter and summer, and the statement is not correct, both as regards American and Canadian ports.

Q. And you are in a position to give a flat contradiction to the statement in this book which I have just read with regard to the insurance?—A. I believe it to be untrue. I cannot speak from personal knowledge, but I speak from the testimony of men whom I can rely upon, that that statement is highly coloured and in the main untrue.

Q. It is untrue with regard to Canada?—A. Yes, sir.

Q. And untrue with regard to the United States?—A. Yes, sir.

MR. GREENSHIELDS.—And yet Mr. Plimsoll publishes this untrue statement in his book, and in the preface of that he says: "No rights reserved. Copy illustrations, or re-print the whole by instalments, as the County Council *Gazette* is now doing. Anything to make the facts well known—S. Plimsoll." And these are the kind of facts that Mr. Plimsoll wishes to make widely known.

MR. POPHAM.—I wish to state before I close my evidence that with regard to the officer who may be appointed by the Government to inspect cattle that I think it might be advantageous if he were attached to the port warden's office, so as not to multiply offices in Montreal.

MR. SMITH.—Instead of multiplying offices you would have this official in the port warden's office?—A. Yes. I misunderstood you at first when you asked me this question, sir, but I am glad to have an opportunity of agreeing with you that it would be better not to multiply the offices in Montreal.

This concluded the evidence of the witness.

EDWARD L. BOND, General Manager for Canada of the British and Foreign Marine and the Reliance Marine Insurance Company, with head offices at Liverpool, both of which companies are engaged in the insurance of cattle shipped from Canada and the United States to Great Britain, gave the following evidence:—

By Mr. Smith:

Q. Can you give us any information on this question, Mr. Bond?—A. I would like to make a short statement in confirmation of the evidence given by Mr. Popham. I would like to say that the report submitted by Mr. Popham is the result of the deliberations of the Special Committee of the Board of Marine Underwriters appointed for that purpose, and is concurred in by all the underwriters. I agree with Mr. Popham in his remarks regarding the engagement of cattle men to take charge of the cattle on their voyage across to England. I believe it would be better to allow the cattle shippers to select their own men, provided those men are placed on the ship's articles. I agree with Mr. Popham in his objections to loading cattle on the hatches of steamships. I think that such a practice is detrimental to the cattle themselves, and that it might at times be dangerous in the handling of the ship. I have often expressed, and I would like now to confirm what I have said, that I object to cows in calf being allowed to be placed on board for shipment. Regarding deck loads of cattle in the Fall out of the St. Lawrence, I believe that the restrictions recommended by the underwriters and suggestions made by them, if they are carried out, will cause cattle to be carried safely; but I would further recommend that the fittings for the cattle on board the steamers should be made absolutely watertight.

Q. The fittings on the upper deck?—A. Yes; because I believe suffering would come to the animals if water or spray were washed over them and was allowed to freeze. This point I have urged several times.

Q. The other witness who gave evidence seemed to think that the cattle were very comfortable on the upper deck in the middle of winter?—A. All I know is that cattle from the St. Lawrence go through the cold in the vicinity of Newfoundland, and if spray goes over them they must suffer. I, therefore, contend that the fittings on the upper deck should be absolutely watertight.

Q. What thickness would you recommend that the planks over the temporary houses should be?—A. I would recommend that there be 2-inch fittings with angle-iron frames. I would just like to make a statement regarding the care that is taken by the underwriters in the matter of inspection of cattle when they are shipped. The interest of the underwriters is more closely allied to the humanitarian question than almost any other. It is our pecuniary interest to see that the cattle are taken to the other side with as little trouble or pain as possible. We have a careful inspection made before the vessel leaves, and our inspectors report in writing on every vessel. We have also paid inspectors at the port of destination, and they advise us regularly in connection with any serious losses that may have occurred, and send us recommendations which might help to avoid such casualties in the future. These recommendations we always endeavour to carry out. I would like also to say that since I have been insuring cattle, now some seven years, I have always found the steamship companies willing to aid us and to consult with us in these matters, although some times there have been decided differences of opinion between us. On the question of transient steamers, I differ somewhat from Mr. Popham. I would like to see the "tramps" treated on their merits, and the same rules which we have suggested applied to them as to the regular liners.

Q. You would not prohibit them engaging in the trade?—A. I would not make a cast-iron rule to prohibit them. I would try to treat each vessel on her own merits.

Q. That is your opinion—that each vessel should be treated on her own merits?—A. Yes.

Q. And you see no objection to carrying cattle through the fall months on the upper deck?—A. Not if the fittings are properly erected.

Q. Are you aware of any case of cruelty to the animals that ever came under your notice as insurers of cattle—I do not mean ordinary fatigue to the animals, but deliberate cruelty?—A. I am not aware of any such cases.

Q. Do you make inquiry as to the cause of the deaths of the animals? Does your inspector report to you from England the causes of the deaths?—A. Yes.

Q. What is the general cause of these losses?—A. Recently our inspector has expressed his opinion that it was caused by the heavy weather washing off the cattle, and in other cases that deaths were caused for want of ventilation.

Q. Did you ever hear of any cases in which the animals suffer from cold or wet on the voyage?—A. I never heard of any particular suffering from the cold or wet. Want of ventilation and heavy weather are the only two causes I have heard of.

By Mr. Greenshields:

Q. And this can be very easily remedied?—A. Yes; that can be very easily remedied.

By Mr. Smith:

Q. Do you ever recollect any as heavy weather in past years as vessels have experienced this Fall?—A. The weather this Fall has been worse than any I have experienced since I have been in the business.

Q. Was the underwriting a losing business this fall?—A. No, I expect we will have a small profit.

Q. Is that with all the losses?—A. For the year from December to December, I believe we will have a small profit.

Q. But it has been an exceptionally bad year?—A. Yes; it has been an exceptionally bad year.

Q. Are there ever any vessels that cannot get a line of insurance taken on them?—A. Yes.

Q. Do you know of any vessels in this port that could not get the underwriters to write on them?—A. I cannot name them at present, but I know there were vessels this fall that we absolutely refused to write on.

Q. And what became of them?—A. They abandoned the cattle business and took other cargo.

Q. That is after they found they could not get the underwriters to write on them?—A. Yes.

Q. That was a check on them from carrying cattle?—A. Yes.

Q. Do you think also that Government inspection of animals will be an improvement?—A. I think it is absolutely necessary that a Government inspector should be appointed to meet the requirements of the growing trade.

Q. It would relieve the underwriters from a great deal of trouble and odium, I suppose?—A. I don't think that we mind the odium very much, but what we do require is an arbitrator in cases of dispute—for instance, when we ask a vessel to make a certain alteration they may say it is not necessary, and it would be a good thing in such cases to have an independent party to whom we could submit the question and abide by his decision. I do not think we would be unreasonable in the matter. Even in those recommendations which are submitted to the Government, if the steamship owners had pointed out any little matter to us, we would be quite open to meet their views, if they gave any just reason for our doing so.

Q. If the Government had not taken up this question was it likely that the underwriters would have asked the Government to take it up?—A. Well, yes; I think so. If any one had ever mooted the question I certainly would have urged it very strongly.

Q. You do not agree with some of the witnesses that "tramps" should be ejected from the trade?—A. No; I would treat each vessel on its own merits.

Q. Whether she was a "tramp" or a regular liner?—A. I would consider her fitness for the trade when she came here, and I would treat her on her own merits.

Q. Are there ever any cattle taken over to England without insurance?—A. Very few. I think within my recollection that I only know of one or two cases.

Q. If a vessel could not get insurance would the owner of the cattle still ship them on her?—A. No; I should think not. It would require a very wealthy man to take that risk. As an ordinary rule, the cattle shippers have to draw against the cattle, and no bank would cash a draft without an insurance certificate attached to it unless the man was very wealthy.

Q. You agree with all the other recommendations made by Mr. Popham?—A. I agree entirely with them.

Q. You oppose the light, thin houses for cattle, made of inch boards and light frames?—A. Yes; decidedly.

Q. In the Fall of the year or during the whole season?—A. More especially in the Fall of the year. But a storm may come and catch a vessel at any time, and I believe the fittings should be strong throughout the year.

Q. And you believe that these fittings might be retained by the vessel instead of being thrown aside. You believe they should be carried with the vessel?—A. Yes.

Q. Do you think it would injure the trade to prohibit vessels from taking deck-loads of cattle in the Fall?—A. Yes; I believe it would.

Q. In what respect would it injure the trade. They would get a better price, likely if a smaller number were exported?—A. There are always a large number of cattle to go be shipped, and if you restrict the vessels carrying deck-loads from this port they would have difficulty in getting the cattle across. I believe it would cause great scarcity of space to the cattle shippers. As it is at present even when transient vessels come here and take deck loads in the fall of the year, at times there is a scarcity of space on board the steamers.

Q. The cattle shippers would prefer to have deck loads?—A. That is my impression.

Q. They would not advocate restricting the deck-loads? A. I do not think so.

Mr. GREENSHIELDS.—Is there any regulation in the insurance office you represent by which, if an animal is killed after an accident to her on board ship, you do not pay the insurance?—A. None whatever.

Q. You have read Mr. Plimsoll's book in this respect. What have you got to say in regard to that statement?—A. I can say that question has never come within my knowledge. On the contrary, if I were asked the question as a marine underwriter I would urge that the animal be killed as soon as possible, if death would save it any suffering. We would only be too glad to pay the insurance in such a case.

Q. Have you knowledge of the practice of the insurance companies in the United States?—A. Yes; I insure from the United States ports regularly, and the same rule applies there with regard to insurance that applies here. I never heard at any time of persons endeavouring to bring badly maimed cattle forward, nor have I ever heard of the slightest hesitation on the part of insurance companies to pay for cattle if they had to be killed on board ship.

By Mr. Smith:

Q. Are the insurance rates the same here as they are in the States? Have we an advantage here in the insurance rates over the United States?—A. No; the rates range about the same. In the fall of the year we get higher rates out of the St. Lawrence.

Q. Is that because you consider there is more risk?—A. There is more risk from the underwriters' point of view in connection with the hull of the vessel. There is more of a total loss risk.

Q. Are the rates of freight about the same from the United States this year?—A. That I cannot advise you on.

Q. Do you get a special report from your agent in England when there is a very heavy loss?—A. Yes; always.

Q. And your experience is that these losses occur either from want of ventilation or on account of heavy weather?—A. Yes; largely that is the case. I may say that these reports come from very capable men in Liverpool to the Western Insurance Company, and at present our arrangement is to pay a portion of the fees and get the reports. The agent of the Western Insurance Company is here, and he will give you information on that point. I may say that Mr. Kirkham's reports to the underwriters here have been found very reliable.

Q. Does he give any recommendations when these losses take place, with a view to avoid future accidents?—A. Yes; very often.

Q. What is his opinion how to avoid these heavy losses?—A. Well, the recommendations which have been submitted by the underwriters are based upon the different reports we have received from him from time to time, and all the information that we have collected we have drafted in that report.

Q. Do you think that the port warden would be a suitable person to inspect vessels with regard to their accommodation for carrying cattle?—A. Unless you gave the Port Warden an extra assistant, experienced in the cattle business I would not consider his inspection satisfactory; but if the regulations provide that one of his deputies should be an expert in the cattle business I should say it would be satisfactory.

This concluded the evidence of the witness.

CAPTAIN JAMES J. RILEY, of the City of Montreal, Marine Underwriters' Insurance Inspector, and Inspector for the Allan and Dominion Lines, gave the following evidence:—

By Mr. Smith:

Q. Mr. Riley, you have had considerable experience in the shipping trade?—A. Yes; I am inspector of the shipments of cattle from the port of Montreal for the Allan and Dominion Line companies.

Q. Would you kindly state any suggestions you wish to offer?—A. While agreeing in a general way with the suggestions made by the Montreal Underwriters' Association, submitted by Mr. Popham, and while strenuously advocating the appointment of an independent Government inspector, my experience teaches me that a wide margin must be left to the discretion of the inspector in reference to the shipment of cattle. I do not think that you can make any Government regulation saying that cattle shall be or shall not be put on the hatches of steamers. My reason for this is, that you cannot make a hard and fast rule in this matter, as it frequently happens on the larger vessels that two or three hatches are placed together. Some of the vessels have larger hatches than others, and the discretion of the cattle inspector, in a case like that, would come in as to whether they should put cattle on the hatches or not.

Q. Are the hatches covered over with the regular fittings and the cattle put standing on them?—A. It frequently happens that two or three hatches are close together, and the discretion of the inspector would be required to say on which hatch cattle should not be placed. With regard to the angle-iron frames, which it is proposed to throw over the spar decks of a vessel, and cover in with 2-inch plank, the discretion of the inspector would be required there also, as space would need to be left for taking cargo in and out of the hatchways.

Q. What do you say in reference to the suggestion that the frame should be of angle-iron with 2-inch plank, and that they should be watertight on the upper deck?—A. How could they make them watertight? It would be impossible to make them watertight. A large space would have to be left to allow of the discharging and taking on of cargo. If it were practical it would be a very good thing to make the stalls watertight, but I merely throw out the suggestion to show that the Government must exercise a wide discretion in getting an able inspector, and that they must leave most of the details to him, or to some special committee, which would guide him in relation to the discharge of his duties.

Q. You do not approve of the regulations being furnished to him?—A. As far as general regulations are concerned, I should say that they should be supplied to him, but I wish to mention these points because of necessity he must be allowed a discretion. In every case he cannot have hard and fast rules imposed upon him.

Q. Would you approve of the port warden being the inspector of the vessel?—A. I would approve of the officer being connected with the port warden's office.

Q. Do you approve of 1-inch boards being used for the fittings of the cattle stalls?—A. No.

Q. You think 1-inch boards too light?—A. Yes.

Q. Do you approve of deck loads of cattle being taken in the fall and winter months on properly constructed vessels?—A. Yes.

Q. Do you know if the mortality amongst cattle crossing the Atlantic is greater in the winter than in the summer months?—A. I believe it is.

Q. Do you think that the animals suffer anything from the cold by being taken on the upper decks during the winter?—A. After the first two or three days out the weather is warm. In two days the cold is passed. If they suffer at all, it will only be for a short time.

Q. That is, if they suffer from the cold?—A. Yes.

Q. But the cattle underneath the upper deck would not suffer?—A. No, they would not suffer.

Q. Would you recommend any restrictions as to carrying cattle during the cold weather?—A. No, I do not think any restrictions should be placed on that, as the records of the vessel show that cattle are nearly as well carried during the winter months as during the summer months.

Q. Is the mortality greater amongst the distillery cattle than amongst the "stockers"?—A. My six years experience does not show that.

Q. The mortality is not greater?—A. Not this year.

Q. Well, was it greater in previous years?—A. I believe the mortality had been greater amongst the distillery cattle some years ago.

Q. In warm weather, if the cattle were shipped further east than Montreal—if they were shipped from Quebec, for instance—would the mortality be as great amongst the fat cattle? It was mentioned to-day that this cattle suffered a great deal from heat between Montreal and Quebec?—A. I think the railway journey would do them as much harm as a passage down the river in well-ventilated boats.

Q. They sometimes die going down the river, do they not?—A. Yes; sometimes.

Q. And they receive damage on the voyage down, do they not?—A. They receive no damage, with the fans now in use on board well-regulated boats.

Q. I suppose you do not know what the mortality is between Montreal and Quebec or between Montreal and Father Point in the summer months—July and August?—A. We have not the returns in that particular—the returns give the average mortality for the year.

Q. And you think the cattle would not be any better off on the railway journey than on the passage in the steamers?—A. The cattle would be no better on the railway cars than they would be on well-regulated vessels.

Q. Have you any suggestions to make as to the better fitting up of the vessels for carrying cattle, or as to what changes should be made?—A. I think the Board of Underwriters have made all the suggestions that are necessary. The appointment of an inspector and the establishment of a standard size of stalls would meet most of the difficulties of the case.

Q. What is your idea about the space which should be allowed to each animal?—A. That is a question of experience. The United States cattle are larger than ours, as a rule, and the shippers from that country seem well content with a space of 2 feet 6 inches for each animal.

Q. That is the space they allow on vessels sailing from the United States?—A. Yes.

Q. Do you think that is sufficient?—A. Yes; I think 2 feet 6 inches by 8 feet is sufficient.

Q. Are the cattle shipped from the United States ports the same as here—inspected only by the veterinary inspector and the insurance companies?—A. The mode of shipment in the United States is just the same as here.

Q. Would you recommend that a better class of cattle men be employed to take charge of cattle on the voyage?—A. I think there is much room for improvement in that respect.

Q. Would you put the cattle men on the articles of the ship?—A. I would have them amenable to the discipline of the ship.

Q. They could not be made amenable to the discipline of the ship unless they were put on the articles?—A. Well, put them on the articles.

Q. They might work or not, just as they pleased, if they were not put on the articles?—A. Well, put them on the articles.

Q. Do you think the trade is as well conducted now as it possibly could be conducted?—A. I think there is room for improvement. I think the appointment of an inspector would be a great improvement.

Q. Otherwise you think the trade is well carried on?—A. Yes.

Q. And you would not recommend any change in the law?—A. Not apart from the appointment of an inspector and the making of regulations for his guidance.

Q. Would you not recommend any different law for "tramps" than for other vessels?—A. I think that would come in under the jurisdiction of the inspector. It would be the inspector's duty to say what would be a fit and proper ship to carry cattle, and what were the necessary qualifications to make her a fit ship. If she complies with all the regulations and the exporters are willing to ship their cattle, let her take them.

Q. Your experience has been that cattle shipped from the port at Montreal are not wantonly or cruelly ill-treated on board ships leaving this port?—A. I never saw any cruelty to the animals, and I never heard of any cruelty to them until I read Mr. Plimsoll's book.

Q. You have had experience in shipping cattle from here, have you not? You inspect them when put on board?—A. Yes.

Q. Is there any object or purpose in keeping the animals standing during the whole voyage?—A. They are never kept standing.

Q. Is there any object in keeping them standing?—A. None whatever.

Q. Mr. Plimsoll, in the quotations he puts in his book, seems to give the public the idea that the main object of the men in charge of the cattle is not to allow them to lie down. Would there be any object in doing that?—A. None whatever.

By Mr. Smith:

Q. Unless for want of space. Somebody had stated that the animals have not room to lie down?—A. It frequently happens that the animals have not intelligence enough to keep close together and lie down in their proper places. They may sprawl over and occupy the place of other animals, but there appears to be an understanding between them, by which they take turn about in lying down. When they are tired of keeping that position they rise up and let the others lie down. They seem to keep watch and watch, not regulated as with sailors, by the sound of the bell, but by their own instinct.

Q. As a matter of fact, all the animals do lie down?—A. Yes.

Q. You have seen them lie down?—A. Yes; I have seen them lie down 15 and 20 in a row.

Q. That is with 2 feet 6 inches allotted to each animal?—A. With the ordinary space allowed to them, whatever it was.

Q. As a matter of fact, four animals put in a space of 2 feet 6 inches or 2 feet 8 inches can lie down, can they not?—A. They do lie down.

Q. Do they all lie down at the same time?—A. Yes; at the same time.

By Mr. Greenshields:

Q. Are they ever shipped from the port at Montreal loaded heads and tails as Mr. Plimsoll illustrates on page 41 of his book? Look at that picture and see if it is anything like the manner in which cattle are loaded here?—A. It is nothing whatever like the way in which cattle are loaded here. I never saw or heard of animals being loaded on board steamers in that way. The first time I ever heard of it was in that remarkable book.

Q. As a matter of fact, they are not loaded that way on any steamships here?—A. They are not.

By Mr. Smith:

Q. Do they go loose on board? This illustration might be when they are driven first on board. Are the animals loaded by rope individually, or do they come in a crowd?—A. They are taken on board and put in their places, and roped as they come to their places. This picture seems to be purely imaginary on the part of whoever drew it, for in my twelve years' experience of the cattle trade I have never seen anything that approaches the description given in that book.

By Mr. Greenshields:

Q. As a matter of fact, Mr. Plimsoll, in his book, assigns as a reason why they are loaded in that way that they can be packed more closely together, and that in this way they support one another, so that it could not be a mere accident, according to his statement that they are put on board the steamer in this way. He says that the cattle are packed heads and tails, and that if one falls down it is trampled over by the other and left there to die. Is there any truth in that statement?—A. No truth at all.

By Mr. Smith:

Q. This is as regards the cases you know of here—as regards the St. Lawrence trade?—A. I never heard of such a thing.

By Mr. Greenshields :

Q. Did you ever see cattle loaded in American ports?—A. Yes.

Q. Did you ever see them loaded in the way described here?—A. No.

Q. Are the cattle loaded the same way at the American ports as they are here?—A. Yes; pretty near the same way.

Q. Could you feed cattle in the troughs if they were compelled to lie down?—A. No.

Q. Do you think that all this is pure imagination on the part of the writer?—A. I will not put it in that way. I looked at his picture, and I tried to find or think of some remote case for the existence of this remarkable work, but I could not find any. I think it must be a work of pure imagination, or it might have been taken on the lighters which bring the cattle from the yards in New York to the vessel. Some of the gentlemen here who have loaded cattle in New York can perhaps enlighten the commission on this point.

Q. Would not the appearance of the book show that the cattle were not between decks when it was taken or imagined?—A. That is evident.

By Mr. Smith :

Q. You know of no such thing as an effort being made to keep the cattle on their feet during the voyage?—A. No, sir. Not only that, but if the cattle were to be kept on their feet it would take an army of men to do so.

Q. It would be cheaper to give the cattle more room and allow them to lie down?—A. Yes; course. It would keep an army of vigilant and careful men very busy in making the cattle stand. The evidence so far seems to show that the men in charge of the cattle are not remarkable for vigilance as a general rule.

Q. There would be no object in pouring paraffine oil in the ears of the animals as is stated in this book?—A. No object whatever. I might say that last week Mr. Plimsoll told me that the cattle were forcibly kept on their feet, and I sought to convince him that such was not the case, as I knew from my own experience of many years. He flew off at a tangent, and behaved in a manner which I thought was rather regretful on his part.

Q. And he believed that your information was not a fact?—A. He told me it was a fact that the animals were forcibly kept on their feet during the whole voyage.

Q. Do you know anything about this question as to the payment of insurance. It has been stated that the insurance companies will not pay the insurance unless the animals die a natural death?—A. They pay on the master's certificate of death, if the death occurs from any cause whatever arising during the passage.

Q. If an animal were injured and put to death to relieve it from suffering would the insurance companies pay?—A. Yes; and I may say further that some of the insurance companies have paid even when the animals were landed in a dying condition. There are gentlemen here who can bear me out in that statement.

Q. There is no rule prevailing amongst insurance companies that if an animal had its back broken it should be carried across the Atlantic for the purpose of landing it alive, and the insurance companies would then be relieved from the liability?—A. There is no such ruling. Any man in charge of cattle would be quite within his rights to relieve an animal from suffering of that character during the voyage and the insurance money would be paid over without cavil or question by the underwriters.

This concluded the evidence of the witness.

ROBERT BICKERDIKE, Member of the Dominion Live Stock Association and exporter of live stock from the Dominion of Canada and the United States, gave the following evidence:—

By Mr. Greenshields :

Q. How long have you been in the cattle export business?—A. I have been connected with the exportation of cattle since 1876.

Q. Have you been an extensive exporter of cattle since that time?—A. I have been an exporter of cattle since that time.

Q. Now, will you state the manner in which the cattle are treated from the time they arrive by train in the city of Montreal until they are landed on board ship? State what the wants and necessities of the port of Montreal are with regard to that, and everything in connection with the treatment of cattle?—A. In the first place, the moment the cattle arrive in the yards from the trains, the Government Veterinary Inspector is notified that there is such a number of cattle in either the Grand Trunk or Canadian Pacific Railway stock yard, which are intended for shipment on a certain steamer which is named. The Government Veterinary Inspector then visits the yards and inspects the cattle, and sees that they are entirely free from disease, and he counts out any animals that he thinks are not able to cross the Atlantic. I may here mention that we have no contagious diseases whatever amongst Canadian cattle.

By Mr. Smith:

Q. What becomes of the cattle which he counts out?—A. They are supposed not to be strong enough to undertake the passage, and they are generally put on pastures or taken to the stables to recuperate.

Q. How are these animals taken from the yards to the steamer?—A. They are driven to the steamer, and in some cases they are brought down in cars to the wharf. In that case they go on the wharf alongside the steamer, or as near as they can get to it, and the cattle are then shipped on board.

Q. Are the facilities good here for getting the cattle from the yards to the steamers?—A. The facilities are not as good as we should like to see them, and we think they can be much improved.

Q. In what respect, do you think, can they be much improved?—A. Something in the line of what the underwriters have suggested. There should be a union stock yard here. I understand that the Board of Harbour Commissioners and the Board of Trade of Montreal are working in the direction of improving the facilities for the loading of live stock in this port. I would refer you to the following suggestions made by the Dominion Live Stock Association to the Government:—

“19th December, 1890.

“To the Minister of Marine and the Minister of Agriculture of the Dominion of Canada.

“SIRS,—In view of the necessity of improved facilities for the export of live stock, we beg to submit, on behalf of the Montreal Live Stock Exporters, that we entirely approve of the recommendation made by the Marine Underwriters of Montreal a copy of which we herewith attach, and would beg leave further to add:

“1. We would call your attention to the great importance in the export trade in ‘Stockers’ or ‘Store Cattle’ which has grown to such large proportion, during the past few years. Out of the 123,000 head of cattle exported from Canada during the past season, fully 70,000 head consisted of this class of cattle. We therefore beg of you to bear in mind the importance of this branch of the trade in any new regulations that may be made regarding the shipping of cattle. In connection with this we would say, that if any absolute rule is laid down, by which small store cattle must occupy the same space as fat cattle, and consequently be charged the same freight per head, the cost of transportation would kill this branch of the trade.

“2. That not over four large cattle or five store cattle be placed in one compartment.

“3. That the alleyways for feeding purposes be not less than 2 feet in width at any point, and that no bag feed, hay, or other obstructions be allowed to be placed in them.

“4. That no cattle be carried on the hatches.

“5. That before any steamer received a certificate for carrying cattle, the inspector shall require satisfactory evidence that the captain of such steamer is experienced in the live stock carrying trade.

"6. That the inspector shall have power to suspend the certificate of any cattle-carrying steamer for cause.

7. That the necessary steps be taken to prevent the occurrence of the annoyance and expense that live stock exporters have been subject to during the past season, through the groundless suspicion of infection, as in the cases of the "Norse King" and "Corean," as it has been established beyond any doubt that no contagious disease exists among Canadian cattle.

"8. That the freight be collected only on the number of animals landed alive, which would be an incentive to owners and captains of 'outside' steamers to take all proper precautions for the safety of the animals."

Q. Your sixth recommendation in that document says that the inspector shall have power to suspend the certificate of any cattle-carrying steamer for cause. Does that mean that you recommend every vessel to have a license or a certificate, and that the vessel shall only keep it during the time that it conducts the business properly? Whenever the cattle are not properly carried by the steamer the certificate will be cancelled, or do you mean that every vessel carrying cattle should be inspected when she comes to port?—A. It means that every vessel shall be inspected when she comes to port, and if found properly qualified to carry cattle that it should have a certificate.

Q. And only have a certificate for that one voyage?—A. No; that she shall have an annual certificate, and that if there was anything wrong the inspector would have power to suspend the certificate, until there was an enquiry made into the cause of complaint.

Q. Do you recommend that each vessel should have an annual certificate as a vessel fit to carry live stock?—A. Yes; and which certificate should be liable to be cancelled by the inspector for cause.

Q. I see that you also recommend that freight be collected only on the number of animals landed alive. Would it be an incentive to owners and captains of outside steamers to take all proper precautions for the safety of the animals? Do you think that would be an improvement on the present system?—A. I think that would be a big improvement, especially in the case of "tramps" that come here.

Q. They would have to charge more freight, I suppose?—A. They might charge more freight, but God knows they charge enough freight now.

Q. I thought it was stated here that the freight on the shipping was so low that shipping was not a paying trade. Was it not stated here that the shipowners could not live if it were not for the deck loading of cattle?—A. They mean that they could not live except for the cattle trade.

Q. They said that they could not exist if it were not for the carrying of deck loads of cattle?—A. I know that the freight is very high out of the port at Montreal.

Q. And you consider that the shipowners are very well paid?—A. I think they are too well paid, in fact.

Q. Is the rate higher on distillery cattle than on stockers?—A. No.

Q. Do you pay the same rate?—A. We take the accommodation by space, and put five "stockers" in the space of four distillery cattle.

Q. You pay the same freight on four fat cattle, that you pay on five "stockers" cattle?—A. Exactly.

Q. Do you recommend that the carrying of deck loads of cattle should be prohibited in the fall of the year?—A. We recommend that there should be no deck loads of cattle in the fall of the year, unless there is a permanent covering over the animals.

Q. That is your opinion?—A. Yes, sir.

By Mr. Greenshields:

Q. Is it possible to put a permanent covering over the animals carried on the deck?—A. I think it is possible. So much is it possible that the new steamers which are being built now for the cattle-carrying trade are coming out with perma-

ment coverings. I understand that both the Allan and Dominion Lines are doing that.

Q. So that they will not put cattle in those temporary coverings again on the deck?—A. No.

Q. How much space should be allowed for each animal, in your opinion?—A. The Government regulations state that the space for each animal shall be 2 feet 8 inches by 8 feet up to the 15th July, and from the 15th July to the close of the season it is reduced to 2 feet 6 inches on the top deck, while it remains 2 feet 8 inches on the other decks.

By Mr. Smith:

Q. Have these regulations been followed?—A. They have in most cases. Quite a number of the steamers have permanent fittings of 2 feet 8 inches by 8 feet. The Béaver Line and some of the others have their boats fitted at a space of 2 feet 8 inches by 8 feet.

Q. And that is sufficient space to carry the animals comfortably across the Atlantic?—A. Yes; quite sufficient.

Q. And all the animals can lie down very comfortably in this space, can they?—A. Yes; they can lie down very comfortably.

Q. Have you ever seen them lying down?—A. Yes; there is no doubt but that they all can lie down comfortably in a space 2 feet 8 inches by 8 feet.

Q. At what time would you recommend that these regulations should take effect—that is to say, that no deck load of cattle should be carried without permanent fittings? After the 1st September or October—which date would you suggest?—A. After the middle of September.

Q. What do you mean by permanent covering?—A. I mean a cover such as was recommended by the Board of Underwriters.

Q. That is 2 inch plank, which would be made watertight?—A. Yes; some kind of covering that would not increase the dues, and which would be put up with very little extra expense to the steamship owners.

Q. They could keep these coverings up when they wished and take them down and put them back again?—A. Yes; I may say that cattle are now being carried from this port without any hardship or suffering whatever under the present facilities offered up to the 15th of September.

Q. And any hardship they suffer now on the voyage would be avoided by adopting the recommendations made by your association?—A. Any of the hardships the cattle suffer now would be entirely removed if those recommendations which we have made were carried out.

Q. You believe in cattle ships carrying steam fans?—A. I believe that the system of ventilation is not complete without steam fans.

Q. Then you would shut out the transient vessels that do not have the steam fans?—A. Not necessarily, because the cost of the fans is only \$125, and they could be rented for about \$25 a voyage.

Q. They could be fitted up and connected with the engine very easily, I suppose?—A. Yes; that can be done very easily, and the smallest tramp coming here could well afford to put in a fan or two fans, if necessary.

Q. Would these permanent houses on deck, which you recommend, be fixed on angle-iron supports?—A. I would not care whether they were composed of angle-iron or any other kind of iron, as long as they were sufficiently strong to make them proof against the weather and against the seas.

Q. Do you think any kind of protection could be built which would have withstood the gales which were experienced on the Atlantic this fall?—A. I think so.

Q. Then you think there was a defect in the fitting of these vessels which lost so many cattle?—A. I think if the vessels were provided with permanent fittings for the cattle the loss would be very much reduced.

Q. Did you ship any cattle by the steamer "Straits of Magellan"?—A. I did.

Q. How many did you lose ?—A. I do not remember. I think I lost about one hundred.

Q. Did you hear how the cattle were killed ?—A. We understood from the foreman that the waves came right on board the ship and smashed the fittings, and we consequently think the cause was that some of the cattle were swept off the upper deck. Quite a number of the animals were killed down below, on account of their having to close down the hatches.

Q. They had no ventilation ?—A. I suppose that was the case.

Q. Were the animals on board the "Straits of Magellan" "stockers" or fat animals ?—A. Yes; they were nearly all "stockers." I may say that after the 15th September 90 per cent. of the cattle shipped from this port are "stockers."

Q. Did they pay you for your loss of cattle on the "Straits of Magellan?"—A. The underwriters paid the loss.

Q. Did you make a good profit by it, because it is alleged that the shippers have no interest in the cattle once they are put on board, when they are insured ?—A. I suppose that was alleged by Mr. Plimsoll.

Q. It is alleged that the owners of the cattle have no interest in them when they are put on board ship and insured. Do you insure for the full amount, or do you carry part of the insurance yourself ?—A. We carry one-fourth of the insurance ourselves, and to show you how anxious we are to get the cattle over in good condition I may state that at present we have to pay freight on them, whether they are landed or not.

Q. You pay freight on all the animals that are put on board ?—A. Yes.

Q. Would you prefer to pay the freight only on animals that were landed ?—A. Yes; of course we would, because we do not get the freight insured.

By Mr. Greenshields :

Q. Then in every case the shipper has an interest in the cattle which he puts on board ship ?—A. In every case the shipper has an interest, and in fact he is the only one who has a great interest.

Q. And if the cattle were all lost the insurance is not sufficient to compensate the owner for his loss ?—A. It is not nearly sufficient. The owner of the cattle comes out with a very large loss in such case, because not only does he suffer the loss of the animals, during bad weather, but he also suffers loss on the animals which are landed alive, because they are landed in bad condition. Mr. John Crowe and myself were the largest shippers of "stockers" and in some cases we lost £2 sterling per head on animals which were landed in bad condition. It is not very likely that we would be careless about the treatment of animals on board ship when we suffer such loss.

By Mr. Smith :

Q. The interest of the insurance companies, and of the cattle shippers as well, is that those animals should be landed in as good a condition as possible ?—A. Our interest is that they should be well cared for on the voyage and landed in as good a condition as when they left this port.

Q. As a matter of fact, all the precautions possible, in so far as you can get steamship companies to work with you, are taken to make the cattle comfortable on the voyage, to insure that they are taken over to the old country in as good condition as possible ?—A. Quite so.

Q. Are they sent on board the vessel with sufficient food and water ?—A. We have a tariff as to the food put on board, and as to the water which the steamship supplies. There is an inspector appointed by the Dominion Live Stock Association to see that a sufficient quantity of food is put on board for the animals, and furthermore to see that the quality of the food is good.

Q. Do you think that this inspection would come within the jurisdiction of an officer that might be appointed by the Government to examine vessels and see that they are seaworthy for carrying cattle ?—A. I think that might come

within the jurisdiction of the Government inspector. In the meantime, while there is no such inspector in the port, the Dominion Live Stock Association took the matter into their own hands, so as to see that our cattle were properly cared for. The association appointed Mr. Bowden, a very experienced man, to see that the cattle had sufficient food and water, and that the quality of the food supplied was good.

Q. Do you know of any case in which cattle have been put on board steamers and did not have any food put on board for them?—A. I believe there were one or two cases where small lots of cattle were put on board without hay. I believe that this was done once or twice by accident. Perhaps it might have been done through dishonesty on the part of the shippers, but the cattle would get plenty of food, because they would get supplied by the food belonging to somebody else.

Q. If that were done by accident there was always sufficient food with which to feed the cattle that went over to England?—A. Yes.

Q. Do you know of any instance in which the animals have suffered from hunger going across?—A. Never, unless there was some accident that caused delay of the steamer, or that the hay was carried overboard.

Q. Do you know if there was any case in which the cattle died for want of food?—A. I know of no case of that kind whatever. In the case of the steamer "Quebec," that was out for fifty-two days on one voyage, the animals were a little short of food, and they landed poor and in bad shape, but they did not die for want of food.

Q. They were kept alive during the voyage?—A. Yes; and probably the sailors and the men on board did not have all they wanted to eat during that passage any more than the cattle.

Q. Do you recommend that the cattle should be fed by the shipowners, that the shipowners should supply the food and the cattle attendants, and in every way provide for them, similarly as they provide for passengers on board the steamers?

—A. No; I think it is much better if the cattle shipper should put his own food on board, employ his own men to take charge of the cattle and do his own insurance.

Q. Then all the ship would have to do would be to find water for the cattle?—A. Yes; and food for the cattle men.

Q. How do you do now? Do the cattle men provide food for themselves or do you supply it?—A. The steamship companies undertake to supply them, but the men complain of the food supplied, and we have difficulty in getting good men to go on steamers of that kind.

Q. Do they not get good enough food?—A. They claim that they do not get good enough food on some of Mr. Reford's boats.

By Mr. Greenshields :

Q. Mr. Reford is the gentlemen who complained about the men who went in charge of the cattle in his boats?—A. Yes.

Q. And he complains about the men, and they complain about the food they get on his boats?—A. Yes; they say the food is not fit to use in many cases. I have difficulty in getting first-class men to go on his steamers.

By Mr. Smith :

Q. What is the general rule as to the number of cattle men sent on board?—A. As a general rule, we have a first-class foreman in charge of the cattle. Sometimes there are three foremen on one ship. The foreman's assistants are cheaper men, but the foreman sees that they do their work, and do it well.

By Mr. Greenshields :

Q. Let us deal with the foremen first. As a rule, when the shipment of cattle—five or six or three hundred head of cattle is made—the owners put two or three or four men in charge of the men taking care of the cattle?—A. Yes; they do so in all cases.

Q. Would a shipper send a large number of cattle on board unless there was an experienced foreman in charge of them?—A. No shipper would risk his property and his money without sending a good foreman in charge of the cattle. In many cases a shipment of cattle may represent \$50,000.

Q. The objections that have been made as to the men in charge of the cattle apply to the men under the foreman, and not to the foremen themselves, who are actually in charge?—A. Yes; that is so.

Q. Would it be an improvement, if the men were placed under the captain and had to sign the articles of the ship?—A. I think it would be quite advisable that the cattle men should be obliged to sign articles.

Q. But you are not in favour of allowing the ship to engage the men to go in charge of the cattle?—A. No.

By Mr. Smith:

Q. Would you like the men to be engaged by the shippers, but to sign the articles of the ship?—A. Exactly so; then they would come under the orders of the captain, just the same as if he engaged them.

Q. Do you think that, if this were the case, better men could be engaged to take charge of the cattle? The captain, of course, would have his men under his orders?—A. Yes; he would have them under his orders just the same as the sailors on board the ship.

Q. There would be a fee to the shipping master in case the men were placed on the ship's articles, but I suppose the cattle shippers would be willing to pay that?—A. The fee is so small that there would be no difficulty about that. With a dozen cattle men on board ship it would only amount to \$6, and that is merely a bagatelle.

Q. The cattle owners, you think, are better able to supply food for the cattle than if it were supplied by the steamers?—A. We claim that with regard to the feed for the cattle, and the placing of the insurance, the cattle owners should have all to say in the matter.

Q. Then I suppose that they do not approve of having to pay the freight and insurance together?—A. We would rather pay the freight and place the insurance wherever we liked, instead of having to pay the freight and insurance to the one party. That is the general feeling of the cattle trade.

Mr. JOHN ALLAN.—There is only one company that does not charge them for insurance, and that is ourselves. We guarantee to land their cattle for nothing.

By Mr. Smith:

Q. Was it not included in the freight?

Mr. ALLAN.—No; it was not taken into consideration on the freight.

Q. Was the freight on your steamers higher than on other vessels?

Mr. ALLAN.—Not at all.

Mr. BICKERDIKE.—Then I have got to say that if the Allan Line do not charge for insurance they charge a good deal for freight.

Mr. ALLAN.—Not at all. Our freight was 10 shillings lower the same week that you had to pay freight and insurance to other steamers.

Mr. BICKERDIKE.—That might be explained by the fact that there are some steamers on which space is contracted for a long way ahead.

Mr. ALLAN.—The steamers I speak of were not contracted for a long way ahead. They were contracted for at the same time ours was contracted for.

Mr. GREENSHIELDS, Q.C.—I suppose, as a rule, the steamship companies do not carry the insurance for nothing.

Mr. BICKERDIKE.—It is not my experience that they do. I am glad my friend Mr. Allan says he has done that, and I hope he will continue to do so in the future.

Mr. SMITH.—And no doubt you will engage that all your cattle shall go by the Allan vessels?—A. Oh, no doubt about that at all; I am shipping now only by the Allan Line in the winter.

Q. Do not the Allan Line issue an insurance certificate?—A. Yes.

Q. And it is signed by themselves?—A. Yes.

Mr. ALLAN.—We do not.

Mr. BICKERDIKE.—We do not know how much they charge for the insurance, as it is included in the freight. Whether they charge or not for the insurance is a matter which we have no means of ascertaining, but I hope they do not.

By Mr. Greenshields :

Q. That was their policy in the summer months?—A. Yes; during the season of navigation from the port of Montreal only.

Q. You do not pay in the winter time, do you?—A. All I know is, that they only issue an insurance certificate during the summer time, and that they do not do so at present.

By Mr. Smith :

Q. Do you ever charter transient steamers to carry cattle?—A. Yes, sir; on many occasions.

Q. What is your experience with transient vessels?—A. My experience is, that up to the 15th September they are as good, if not better, as many of the regular line steamers for carrying cattle.

Q. But they have not got steam fans?—A. They do not require them. Up to that date, as a rule, they do not have to close down the holds, and it is only when the steamers would have to close down the hatches through stress of weather that the fans are absolutely necessary.

Q. So that your opinion is, that you would just as soon ship in summer by a transient steamer as by a regular liner?—A. Just as soon.

Q. Would you approve of making any regulations which would legislate the tramps out of the cattle-carrying trade in the fall of the year?—A. No; I should be inclined to legislate for the improvement, not only of the tramps, but the regular line, steamers so that they could carry cattle up to the close of the season on the spar deck.

Q. You do not object to vessels taking deck loads up to the close of navigation?—A. I do, unless they have the permanent coverings, as recommended.

Q. Would you have the regulations changed for vessels carrying cattle after the 15th of September?—A. I would recommend the inspector to limit the space on the spar deck for carrying cattle after the 15th September.

Q. What would you limit it to?—A. To the permanent coverings.

The examination of the witness not being concluded at 5.30 o'clock, the inquiry was adjourned until 10 o'clock on the morning of the 6th January.

MONTREAL, 6th January, 1891.

On the 6th day of January, 1891, the examination of Robert Bickerdike, the foregoing witness, was resumed.

By Mr. Smith :

Q. Do not you recommend permanent coverings for the cattle on the upper deck during the whole season?—A. I do not think that it is absolutely necessary to have the permanent covers up to the middle of September—that is, I would be willing to ship cattle on a steamer that had not permanent covering in the summer months, but I would prefer not to ship on any steamer not having permanent covers after the 15th of September.

Q. Would you call inch boards permanent or temporary coverings?—A. I would call inch boards temporary coverings.

Q. That is the kind of covering they use in the Fall months now?—A. Yes, sir; but in some cases they have used 2-inch boards.

Q. Would you consider it any hardship on the owners of the ship to be obliged to provide 2-inch planks for covering the whole year round?—A. I do not think it would be any hardship on the ship.

Q. If you have angle-iron frames which could be carried always on the ship, instead of being hauled down, as the fittings are now, do you think it would be better?—A. Yes; they could be kept for permanent use, and they would make safer houses for the cattle, and would be altogether better as regards the seamen.

Q. It might shut out some "tramps," I suppose, if the vessels were compelled to put on permanent covers?—A. It might shut out some of the "tramps," which would not go to the expense of putting these permanent covers on.

Q. Of course, the regular liners would be very glad to keep the same permanent fittings. This requirement, that steamers should have permanent fittings and should also carry steam fans, are the two things that you consider would be a great improvement in the cattle-carrying trade?—A. Yes; I consider that every steamer should have fans and permanent covers in the Fall months. I think that a good many of the regular liners now have both the fans and the permanent covers, but the permanent covers do not extend quite far enough on the steamers.

Q. You only go the length of saying that every steamer should have fans and permanent covers in the Fall months?—A. Yes.

Q. But you do not go the length of saying that they should have them all the year round?—A. I think they should have fans all the year round. I do not think the covers are necessary all the year round, but I think it would be a great improvement.

Q. And these two improvements you think might possibly cut out some of the transient vessels from the cattle trade?—A. They would be sure to cut out some of the transient vessels.

Q. Many people have advocated that if the character of the vessels is improved it would make the trade much safer and guard against loss?—A. Yes.

Q. So that a "tramp" coming here, looking for any kind of cargo, when she finds it will cost something to put up those permanent houses and fans, would look for some other freight than cattle?—A. Yes; he would probably take lumber.

Q. Did you ship cattle by the "Straits of Magellan"?—A. I did.

Q. Was she a tramp?—A. Not in the ordinary sense of the word. She has been in the trade pretty regularly.

Q. Would she be likely to carry the improvements which you suggest?—A. I think she would. She is in a line called the McLean Line of Glasgow. She is a large vessel, and large vessels of that class, finding these improvements necessary, would probably provide them if they intended to keep in the trade.

Q. The chances are that if these regulations were put in force steamship owners would only send steamers to this country suitable for the purpose of carrying cattle?—A. I have very little doubt that this would cause a better class of vessels to go into the trade. It would have a very beneficial effect on the cattle-carrying boats.

Q. Do you give as your evidence that no cattle should be carried on the hatches of the steamers?—A. I do. I believe that no cattle should be carried on the hatches except in cases where the hatches are extraordinary large. There might in such a case be a few cattle carried on the hatches, but that would be regulated by the inspector. I would not make this rule absolute, but I would much prefer, generally speaking, that there should be no cattle carried on the hatches.

Q. You say you would leave that to the inspector?—A. Yes.

Q. And why would you not make it a general rule?—A. I think that in most cases it would be an improvement if cattle were not carried on the hatches, but in exceptional cases, where the hatches are very large, there might be a few cattle carried.

Q. Do you agree with what the insurance men recommended in reference to this matter?—A. I do.

Q. The object of making regulations is to leave as little to the discretion of the inspector as possible, so as to make the rules known to everybody by reading them, and in order that they would not have to ask the inspector what the rules were. If you leave these regulations to the discretion of the inspector, with power to change them when he sees fit, they would not be regulations at all. Nobody could

take action until they found out from the inspector what he would recommend to be done. If the rules were printed everyone would know them, and it is always better to have such regulations. How do they keep the hatches fastened down, so as to prevent damage to the cargo?—A. In most cases they have them battened down in the usual way.

Q. Do they put boards for the cattle on the hatches?—A. They put a temporary floor on top of the tarpaulin.

Q. Is that any inconvenience to the cattle?—A. No; they are just as comfortable there as anywhere else. We recommend that no cattle should be carried on the hatches so as to allow room there for the water casks, and to give the men room to do their work. The object is to leave room for the men, and a certain portion of the hatch has to be left clear to get the food up from below.

Q. How do they bring the food up when the cattle are on the hatches?—A. In most cases they leave the food in the open air, with the water and spray washing over it.

Q. Would the salt water injure the food?—A. It injures the hay, and the cattle do not thrive so well on it.

Q. So that there are a number of reasons why it is better the hatches should not be used for carrying cattle?—A. I think on the whole it would be much better if the cattle were not carried on the hatches at all.

Q. What difference would it make to the profits of the ship if cattle were not allowed on the hatches?—A. I cannot say, as the hatches of some steamers are much larger than others, and some steamers carry a larger number of cattle than others.

Q. How much space do you think is necessary for each animal so that the cattle shall have perfect comfort in lying down and resting themselves?—A. For large cattle, I should say the space should be 2 feet 8 inches by 8 feet.

Q. Some people seem to think that a space of 2 feet 6 inches would be sufficient?—A. I do not think any of the practical exporters think that 2 feet 6 inches is sufficient.

Q. Do you bargain for the size of the space when you make arrangements for shipping the cattle?—A. We do not. That is regulated by a Government regulation.

Q. What is the Government regulation?—A. The Government regulation is 2 feet 8 inches by 8 feet all the year round, with the exception of the spar deck, after the 15th July, on which the space is reduced to 2 feet 6 inches by 8 feet.

Q. What was the object of reducing the space then?—A. The object was that most of the large cattle were shipped before the 15th July, and on the representation of the steamship companies the Government allowed the space to be reduced to 2 feet 6 inches.

Q. Do you think it would be a good thing to keep the space at the one size all the year round?—A. Yes; I think it would be a good thing.

Mr. REFORD.—I have no knowledge of any regulations by the Government on this point. I think there was a recommendation by the Government, but no regulation.

Mr. BICKERDIKE.—We have a copy of them.

Mr. REFORD.—I applied to the Department for a copy of the regulations, and they replied there were no regulations.

Mr. CUNNINGHAM (Secretary of the Dominion Live Stock Association).—There is a mutual understanding on the matter between the Government, the steamship companies and the cattle exporters. It is not a regulation, but it is a mutual understanding.

Mr. REFORD.—There is no regulation. I think the recommendation was that the space should be 2 feet 8 inches between decks up to the 20th July, after which it should be 2 feet 6 inches.

Mr. BICKERDIKE.—I am giving the evidence as I believe it to be correct. I am sure there will be no objection for the other gentlemen to give their evidence afterwards.

Mr. SMITH (to Mr. Reford).—Mr. Reford, would you approve of a regulation that the space should be 2 feet 8 inches all the year round on every part of the ship?

Mr. REFORD.—I would not. If that is done it is quite contrary to the usage in the United States. Our rates of freight are, as a rule, governed by the rates in the States, and the cattle shippers are generally very unwilling to pay more than the American rates. If we make our space 2 feet 8 inches all the year round, while the American space is 2 feet 6, we will have to charge more freight. I do not think it is necessary to increase the space. As far as I have seen, 2 feet 6 is ample space, and it would fulfil all the requirements of the shippers. Moreover, if permanent fittings are going to be made on the steamers these fittings, at 2 feet 6 inches space, made for the St. Lawrence trade, would answer equally well in the winter for cattle carried from the American ports, and no change would have to be made in the fittings.

Q. What is the American rule, with regard to the space allowed for each animal? —A. It is 2 feet 6 inches for much larger cattle than we ship from Canada.

Q. Is that 2 feet 6 inches all the year round?—A. Yes; all the year round.

Q. 2 feet 6 inches on every part of the ship?—A. Yes, sir. If the fittings are made permanent and a space regulated at 2 feet 8 inches in the Canadian ports the same vessels will engage in the American trade during the winter, and we lose 2 inches on each space. It will cause us to raise our rates of freight here, which I presume the cattle shippers will object to.

Q. Would 2 inches extra space make any appreciable difference in the cost?—A. Certainly. On some vessels it would make a loss of quite a large sum. I should think on large vessels there would be thirty or forty head less carried on each deck.

Mr. SMITH (to Mr. Bickerdike).—Would it injure the cattle trade if the Canadian rule was made 2 feet 8 inches space all the year round?—A. I do not think it would. On the contrary, I think it would be the proper size for the cattle all the year round, and then five good-sized "stockers" could be put very comfortably in the space of four large cattle.

Q. You think 2 feet 6 inches is rather small for large cattle?—A. I think 2 feet 6 inches is rather small, taking it all round. The cattle would be more comfortable and have better facilities for lying down with 2 feet 8 than 2 feet 6. I think that 2 feet 6 is too small for distillery cattle in the spring of the year, because the distillery cattle in this country are very large.

Q. The ship owners opinion would, of course, be in favour of gaining the 2 inches, but you think the cattle shippers, speaking for yourself, would be better satisfied to have 2 feet 8 inches?—A. I speak for myself and the whole cattle trade when I say that we would prefer 2 feet 8 inches as a fixed space all the year round.

By Mr. Greenshields :

Q. Do you think that the difference of 2 inches in the space would make a difference of 30 or 40 head of cattle on each deck, as Mr. Reford stated?—A. I know of no steamer large enough to make that difference.

Mr. SMITH (to Mr. Bickerdike).—You think the cattle would go over in better condition if they had 2 feet 8 inches than if they had only 2 feet 6 inches?—A. Yes; I think they would. They could lie down more comfortably and be altogether better.

Q. Do you think it would injure our Canadian vessels if the space here were regulated at 2 feet 8 inches, when it is only 2 feet 6 inches in the United States?—A. I think the whole cattle trade would prefer to pay a little more freight and have a regular standard space, whereby there would be no disputes afterwards.

Q. Do you think it would not injure the interests of our steamboat owners?—A. I think not. I think on the contrary they would gain by it.

Q. Are the rates of freight regulated here by the rates in the States? A. Not at all. The rates are regulated by the demand for space in the port.

Q. They do not fix the rates for freight in the States and apply it here?—A. Not at all.

Q. It is regulated by supply and demand here?—A. Yes.

Q. I understood one of the witnesses to say that the rates here were governed by the rates in the States?—A. You just have to pay the market price, and if the space were fixed at 2 feet 8 inches every one would make their calculations on that, and the cattle themselves would be benefited.

Q. If the space were regulated at 2 feet 8 inches the steamships would charge a little more for the freight?—A. They would get the same price for the whole steamer at 2 feet 8 inches as they would at 2 feet 6.

Q. And you think the other cattle exporters agree with you in this?—A. I think the whole of the cattle trade in the country would agree with us—in fact, I am sure they would; for it is the object of everybody to get the cattle over in as good condition as possible.

Q. Do you think that any precautions that might be taken would have prevented the heavy losses of cattle which took place this year on some steamers?—A. I do not think that any rules and regulations which could be made here would have prevented the heavy losses which occurred on account of the extraordinary, extremely severe weather. I think the regulations here would be so improved that ordinary small losses of cattle would not be so bad.

Q. But the heavy losses were the result of fearful gales on the ocean?—A. Yes; the result of the fearful gales and stress of weather. We believe that if we had union stock yards here, so that the cattle could be loaded right from the yards, the mortality would be reduced from one-half to probably less than one-quarter of one per cent. We believe that the mortality will be even more reduced than the lowest average at present.

Q. What height do you think that the animals should have between decks?—A. Anywhere between 7 and 9 feet is high enough for cattle. I think 7 feet 3 inches is about the lowest the height should be.

Q. You think 7 feet 3 inches is sufficient?—A. I think there should be nothing less than 7 feet 3 inches. The higher the decks are the more air there is for the stock and the easier they are ventilated. There is no objection to a high deck. On the contrary, it is a benefit; but there is every objection to a very low deck.

Q. And any vessel not being 7 feet 3 inches high between decks should be rejected for the cattle trade?—A. Nothing under 7 feet 3 inches should get a certificate.

Q. Are you of opinion that small vessels should not be allowed to carry cattle? Have you any opinion to offer as to what size a cattle vessel should be?—A. Any vessel under 1,200 tons should not, I think, be allowed to carry cattle, especially in the fall of the year.

Q. If you have cattle to ship in the summer would you charter a vessel of less than 1,200 tons?—A. I would, if the cattle had to be shipped, and I could get nothing larger; but I would prefer a larger vessel.

Q. Then it would be a good thing to have a regulation that no vessel under 1,200 tons should carry cattle?—A. We would recommend that no vessel under 1,200 tons should carry cattle. We agree with the underwriters on that question.

Q. Have you any opinion as to the horse-power which a cattle-carrying vessel should possess?—A. We think that any steamer having less than 250 horse-power should not carry cattle, especially in the fall of the year. Every cattle-carrying vessel should have water ballast, if possible, and if not, they should have sufficient condensers to provide the necessary water for drinking purposes for the cattle.

MR. REFORD.—You think that both water ballast and condensers are necessary?—A. I think it would be better to have both. We have had instances where the water ballast tanks were broken into and got filled with salt water. If there is a condenser on board the steamer could continue on her voyage in such a case; but if, on the other hand she had not a condenser, she would have to turn back, as in the case of the steamer "Wandhran."

By Mr. Smith :

Q. Do the steamers generally carry both water ballast and condensers at present?—A. I think not. They have generally one or the other, and in some cases both.

Q. Have the regular liners water ballast?—A. Most of them have water ballast. I think all the new steamers built recently have water ballast.

Q. Do you think the hay for the cattle should be stored on the upper deck?—A. I think the feed for the cattle should be under cover in all cases. They use meal as well as hay for the cattle, but the meal is always under deck. We feed the cattle with meal and hay in all cases.

By Mr. Greenshields :

Q. Are you in favour of the feed being stored in the alleyways, where they sometimes store it now?—A. It should not be stored in the alleyways, on account of the inconvenience to the cattle men when they are attending to the animals; but it is sometimes stored in the alleyways now.

Q. You think there should be 2 feet clear in the alleyways?—A. Yes.

Q. If a vessel lurches, when the feed is stored in the alleyways it sometimes goes amongst the cattle and gets lost?—A. It cannot get amongst the cattle very well.

Q. Would not the feed in the alleyways obstruct the ventilation?—A. It is very objectionable, both as regards ventilation and the obstruction it causes to the men handling cattle. It should be well understood that there should be 2 feet clear in the alleyways, and no obstructions there whatever.

By Mr. Smith :

Q. What do you think as to the efficiency of the attendants who go in charge of cattle?—A. I think that we have very good attendants now.

Q. Do you think that the cattle men should be supplied by the owners of the cattle, as at present?—A. I think that the cattle men should be supplied by the owners of the cattle as well as the feed, and that the insurance should be done by the owners of the cattle. I believe that a cattle owner is the best judge of the men to employ to take care of his cattle, just as the captain is the best judge of the sailors to be employed to work the ship.

Q. You do not approve of this plan of the owner of the ship insuring your cattle for you, do you?—A. I do not.

Q. Although we heard it stated yesterday that they insure your cattle for nothing?—A. Well, notwithstanding that, we object to it; and we have grave doubts that the ship owner insures the cattle for nothing.

Q. But it was stated at the inquiry?—A. But everything that is stated is not a fact.

Q. Do you think the cattle men should sign the ship's articles?—A. I think the cattle men should sign the ship's articles, so as to be under the control of the captain.

Q. What do you think of the recommendation that cattle vessels should be lighted with electric light?—A. I believe it would be a great improvement.

Q. Do you think it advisable to make a Government regulation in this respect?—A. I would strongly recommend that the Government should provide that every cattle-carrying ship should be lighted with electric light.

By Mr. Bond (Marine Underwriter) :

Q. Is it a fact that the men object to go down in the dark at night to attend to the cattle, and hence the necessity for electric light? I have a statement that when the cattle were thrown about on a stormy, dark night the men were afraid to go down with a small lantern, as accidents would likely occur to them?—A. That is my reason for saying that I consider the electric light necessary. During a stormy night at sea, when the pens get broken up and the cattle sometimes get loose, it is dangerous for the men to go amongst them in the dark.

By Mr. Smith:

Q. Would not such a regulation as that have a prejudicial effect on the transient steamers? We must keep them in mind?—A. I think that the cost is so small for putting in electric lights that any steamer carrying cattle would put them in. All the new cattle-carrying steamers are fitted up with electric light. A man going amongst the cattle with a lantern has only one free hand, and if the lantern goes out he is left in the dark. Oil lamps are very dangerous, and in fact they won't allow the men to carry oil lamps about on a stormy night.

Q. The insurance men recommend that in fitting up the stalls a certain distance should be left, so that the scuppers could be reached and kept clean. Would that cause any loss of space?—A. It would cause very little loss of space, and it is necessary for the ship as well as for the cattle that the refuse should be allowed to run off. It keeps the cattle dry and in better condition. I know that most of the Allan boats now leave the scuppers clear.

Q. Do the transient steamers do so?—A. Some of them do.

Q. In point of fact, if we have regulations such as are recommended, it would change very much the description of vessels carrying cattle, and it would make the journey much safer and more comfortable for the cattle?—A. It would make it much more comfortable for the cattle, and safer also.

Q. You consider it would benefit the trade generally, although it might exclude some class of vessels?—A. It would exclude a certain class of vessels, but they could go into some other business.

Q. I see that the insurance men recommend the establishment of union stock yards, but that could not be done by Government regulations. That would be for the persons interested in the trade to arrange amongst themselves?—A. Yes; such a recommendation is made, and it is very important that we should have union stock yards. I do not think, however, it would come under a Government regulation. That would be for the City of Montreal, and others interested in the trade of the port, to attend to.

Q. I suppose the different interests concerned would be glad to forward a movement for a union stock yard?—A. The cattle trade would be very anxious for a union stock yards. In fact, we cannot very well get on much longer without them.

Q. And I suppose you would keep the cattle there for a certain time before putting them on board the ship?—A. We would keep them there to rest from 12 to 24 hours.

By Mr. Greenshields:

Q. And you would compel all vessels to take the cattle from the stock yard's wharf?—A. Yes; as far as practicable.

By Mr. Smith:

Q. Is there room enough on the wharf now for the cattle business?—A. The cattle business has grown to such proportions now that it has got beyond the accommodation provided for it. When, some years ago, we only shipped 8,000 or 10,000 head of cattle in the season we got along very well, but last year we shipped 123,000 head, and next year we will probably ship 150,000 head, so that the trade has grown out of the accommodation provided for it. The cattle are not properly handled here now before going aboard the steamer.

Q. And you think that the health of the animals is injured in consequence?—A. Yes; to a certain extent.

Q. And accidents are liable to happen under the present arrangement?—A. Yes; when the cattle stand on the wharf in the heat and teams drive through them they are injured.

Q. Have you known the animals to jump into the water sometimes?—A. Yes; they jump into the water sometimes.

Q. Were they drowned?—A. Not generally. Sometimes it is terrible the way the cattle are abused on the wharf here, by waggons driving through them and

on account of their being compelled to stand on iron and rails, and all sorts of cargo.

By Mr. Greenshields :

Q. Have you any suggestion to offer as to the hours during which large cattle should be loaded?—A. If possible the cattle should be loaded before 8 in the morning, and this applies to distillery cattle especially. The animals should not be loaded until all the dead cargo is on board the steamer.

By Mr. Smith :

Q. Do you remember that heavy losses of cattle have occurred between Montreal and Quebec?—Yes.

Q. To what do you attribute those losses?—A. We attribute those losses to the heat and to the improper facilities for handling cattle on the wharf.

Q. Had you any cattle on the "Carthaginian" when she lost cattle between Montreal and Quebec?—A. No; but I think 186 animals died before they got to Father Point. I think it was due to the steamer taking them on board before she had completed her other cargo, and before she was ready to go right to sea.

Q. It was in the hot season?—A. Yes; and there were not proper facilities for handling the cattle. If these cattle had been taken from the stock yards, put on board the ship at daylight in the morning, and the steamer sailed immediately, I do not think the losses would have occurred.

Q. Do you think the "Carthaginian" a good cattle ship?—A. I think she is one of the best cattle ships leaving Montreal.

MR. SMITH.—I made a voyage on the "Carthaginian" myself, and I thought the cattle were very comfortable on board.

By Mr. Bond :

Q. Do you know at what hour the "Carthaginian" sailed that morning?—I do not know.

By Mr. Smith :

Q. Has the "Carthaginian" steam fans?—A. I think she has steam fans now, but I do not know whether or not she had them at the time she met this heavy loss.

MR. ALLAN.—She has steam fans now, but she had not at that time. I may state that, with the exception of about ten animals, all those which died, died on the spar deck.

By Mr. Smith :

Q. Was that from the heat of the sun?

MR. ALLAN.—Yes; I think entirely from the natural heat of the sun?

Q. Was there a covering over the animals?—A. Yes.

Q. Was it a light covering?—A. Ordinary cattle stalls. All the cattle on that steamer were loaded during the night, with the exception of one train load of distilleries, which were delayed through the cars running off the track. It was 7 in the morning before they could get the train on again, and the steamer sailed about 8.

Q. What do you ascribe the loss to?—A. The natural heat of the sun.

MR. JAMES ALLAN.—It was an extremely hot day, and whatever wind there was, was blowing after the steamer, so that there was no natural draught to the ship. I passed the "Carthaginian" coming up the river, and I remember that it was an intensely warm day.

By Mr. Smith :

Q. (To Mr. Bickerdike).—Did you ever know of any case where the cattle were thrown overboard to ease the vessel by taking off the top weight?—A. I recollect one steamer on which the cattle were jettisoned to save the ship and the balance of the cargo. She was one of Mr. Reford's boats, called the "Colina."

Q. Was she a tramp steamer?—A. No; a regular Donaldson Line boat.

Q. Was she supposed to be overloaded?—A. No; it was supposed that the captain got frightened, and was not able to handle the ship, and he wanted to get his decks clear.

By Mr. Reford:

Q. (To Mr. Bickerdike).—When was that? I do not remember the case. I never heard of that case?—A. Oh yes, you do. You heard of it all right.

Mr. REFORD.—I have no recollection whatever of that case.

Mr. BICKERDIKE.—I can refresh your memory. Your principals, the Donaldsons, and I, had a lawsuit about it. I took the lawsuit against the Messrs Donaldson, and you intervened in the suit.

Mr. REFORD.—What date was it?

Mr. BICKERDIKE.—I think it was in 1877.

Mr. REFORD.—I certainly have no remembrance of that case, nor have I any remembrance of ever defending a suit of that kind.

Mr. ACER (Cattle Exporter).—You ought to remember it, and Mr. Bickerdike has reason to remember it, because it drove him out of the cattle trade for a long time.

Mr. REFORD.—Was that allegation proven?—A. The allegation was proven that the cattle were thrown overboard to save the ship and the balance of the cargo, and I refused to pay freight. She landed in Glasgow with 8 hogs, out of her total shipment of 176 cattle, 120 sheep and 100 hogs. They threw all the cattle and all the sheep and 92 of the hogs overboard, and they would have thrown over the other 8 hogs, but they ran away through the far end of the ship, and they could not get at them.

Mr. REFORD.—I certainly do not remember that.

By Mr. Smith:

Q. (To Mr. Bickerdike).—Did you ever hear of the case of the steamship "Kerweider?"—A. Yes; I heard of that case, and the matter came before the Board of Underwriters, of which Mr. Bond is the secretary, and he will present the facts more intelligently than I can.

Q. Had you any cattle on board that ship?—A. No.

Mr. SMITH.—(To Mr. Bond).—Do you know anything about this case I refer to?—A. Yes; I have got all the papers in connection with it here, and I will file them at the close of the evidence of this witness (Mr. Bickerdike).

Q. Does the correspondence corroborate what Mr. Bickerdike says about throwing the cattle overboard?—A. The cattle were damaged and jettisoned, and a report came from some of the cattle men that they had been thrown overboard alive and were swimming about the ship for sometime. As soon as we heard that we caused an enquiry to be made, and we refused to write cattle on that vessel pending the enquiry. We entered into correspondence with Mr. Munderloh on the question, which I will also file. We had a semi-legal enquiry, and Mr. Trenholme represented us at that enquiry and the steamship company was represented by counsel, also. On Mr. Trenholme's advice we found that the statements of the cattle men were not proven and we withdrew. I will file Mr. Trenholme's opinion, upon which we withdrew the vessel from the black list, as we called it.

Q. You restored her for insurance?—A. Yes.

Q. Did you make any enquiry about who ordered the cattle to be thrown overboard?—A. Yes; the enquiry was very full, and we had all the officers of the vessel before us.

Q. Was the captain the person who ordered the cattle to be thrown overboard?—A. It was one of his officers. The captain was responsible for everything on the vessel and he assumed the responsibility.

Q. But no officer of a vessel would do such thing as that, without the knowledge of the captain?—A. It was the chief officer that gave the order, as far as I recollect.

Q. He would never presume to jettison a cargo without the authority of the captain. I think, even if the captain were in his bed he would call him up and consult him about it?—A. Well, I will file all the correspondence. Our policy is that when animals cannot be saved they should be killed and then thrown overboard. We resented very strongly the throwing overboard of live animals.

Q. Did you ascertain the cause of their being thrown overboard?—A. A heavy sea had struck the vessel and smashed some of the fittings, and the animals had been injured.

Q. No sound cattle were thrown overboard?—A. The evidence points to the fact that they were damaged. The only objection the underwriters raised was, that the animals were thrown overboard alive. The point we wished to make was that if animals were jettisoned, for any cause whatever, they must be killed first. It was one of those cases which are very difficult to prove. It was during the progress of a heavy storm. There was great confusion on board. The cattle sheds were broken down, and when we came to take the evidence it was so contradictory that our counsel advised us we had not sufficient evidence to go on or to take any further action. By his advice we abandoned any further action. The enquiry was decidedly beneficial, as showing to the captains of the vessels that our desire was that no live animal should be thrown overboard.

Q. Would it be any evidence against the system of carrying deck loads of cattle?—A. I think not. I think that if the precautions I have recommended were adopted it would obviate any trouble in the future, and I think that if there were permanent deck fittings the accident to the "Kerweider" would not have occurred.

MR. SMITH (To Mr. Bickerdike).—Are the cattle men well taken care of on board of those vessels?—A. On some lines they have great objection to go on their steamers. They seem to be better treated on the Hansa Line than on any other.

Q. What lines do they object to go on?—A. They object to go on some of Mr. Reford's boats.

Q. What is the cause?—A. They say that they do not get proper food on some of his steamers.

Q. And do you find you have to take an inferior class of men to attend to the cattle on his boats?—A. We have on many occasions to take any kind of men we can get to fill up the complement to attend to the cattle.

Q. I suppose you take some men who have never been in that business before?—A. Yes; we have to take them as assistants to the foreman. We always have good foremen on the boats, and we have to have extra good foremen on some of Mr. Reford's boats to make the men work.

MR. REFORD.—I contradict that entirely. I state that the men on our vessels have been uniformly well treated. It is the first complaint I have heard, and Mr. Bickerdike never complained to me before about the treatment of the men.

MR. GREENSHIELDS (to Mr. Reford).—Did you ever get a letter from Mr. John Crowe, complaining that the men were starved on one of your boats? Do you remember having got that letter?—A. I may have got it, but I do not remember. I have received some complaints.

Q. Do you remember getting a complaint about the steamer "Gerona" on the second last trip she made from the port this fall?—A. I have had complaints.

Q. Will you look in your office and see whether or not you received a letter from Mr. John Crowe, stating that the men were half starved on the "Gerona" and were in consequence not able to work and do their duty on that boat?—A. I shall look and see if I have such a letter.

Q. You have no recollection of it?—A. No; but I know we have had complaints from the cattle men as to their treatment.

Q. What do you mean by saying you contradict the statement of Mr. Bickerdike?—A. Because I have carefully inquired into a number of the statements, made by the cattle men and I have found them false. The captain has contradicted them entirely.

Q. Mr. Bickerdike's statement was that the men complained and did not want to go on the steamers of your line?

Mr. SMITH.—He said he had difficulty in getting the men to go on some of the boats of the Reford Line, because they complained they were not properly treated.

By Mr. Greenshields (to Mr. Reford):

Q. You say you have received complaints as to the treatment of the men?—A. Yes; I suppose all the lines have complaints. You cannot satisfy cattle men.

Q. You said, yesterday, that the men sent in charge of the cattle were little better than brutes?—A. I made no such statement.

Q. That is the conclusion to be drawn from your statement?—A. I do not agree with that conclusion.

Q. You said that everything they used on board, had to be thrown overboard?—A.—That does not make them brutes. I said that they were very dirty. I say that was a general complaint against the men.

Q. How many times had you to throw over bedding on account of the men being filthy or dirty?—A. I cannot give you the data for that.

Q. Can you give one case?—A. The complaints have been general.

Q. Never mind the complaints; you make a specific charge that you had to throw over the articles used by the men?—A. I did not keep track of these complaints. They were made to me by the captain.

Q. Do you know anything about it yourself?—A. I do not see what right you have to ask these questions, anyway.

Mr. GREENSHIELDS.—Of course you are not obliged to come here, but when you do come you ought to answer the questions.

Mr. REFORD.—I do not see what object is to be gained by this kind of examination.

Q. Mr. James Allan, who is acting as counsel for the steamship companies, suggested to you not to answer, did he not?—A. I decline now to answer your questions. These complaints have been made to me frequently and I believe the complaints to be perfectly true.

Q. You decline to go into any particulars as to the charges made against the cattle men?—I do not think any good object can be served by my going fully into the matter.

Q. What was the object you had in view when you made the charges against the cattle men?—A. My object was to have better men put on the boats. If the cattle owners are satisfied with the men they send, it is not necessary to make much trouble about it.

Mr. GREENSHIELDS (to Mr. Bickerdike).—Have you ever crossed on ships carrying cattle?—A. I have.

Q. Several times?—A. Only once.

Q. What was the object of your crossing in a cattle boat?—A. At that time, I was acting exclusively for the Western Insurance Company, and the only branch of the business I did not know, was in reference to the treatment of cattle on board the steamers. At the request of the company, I went on a steamer called the "Katie" in charge of a boat load of cattle.

Q. Did you watch how the cattle were treated on the way over?—A. Yes.

Q. And you went especially for that purpose?—A. Yes.

Q. What kind of weather did you have?—A. We went over in December and experienced ordinary winter weather. It was very rough weather for several days.

Q. How many cattle were carried by that steamer?—A. Between five and six hundred—I do not remember the number, exactly.

Q. Did the cattle lie down?—A. Oh yes.

Q. You have no doubt about that?—A. No doubt. We sailed from New York with the cargo.

Q. How were the cattle loaded on that boat? Were they packed like sardines, heads and tails, as Mr. Plimsoll represents in his book?—A. They were loaded as

they are loaded here, with their heads to the trough and their tails to the sides of the ship.

Q. Did you ever know of cattle being packed on board ship, heads and tails?—A. It could not have been done. No one could take his cattle over in that shape. It could not be done in any case. Even on the lighters, on which they take them from the stock yards to the steamers, in New York, such a thing as Mr. Plimsoll represents could not be done.

Q. And such a thing was never done in any port?—A. Never. That picture could only exist in the imagination of the artist, for the cattle could not be fed if they were loaded that way.

Q. Do you know of any regulation in the insurance companies by which if an animal gets maimed and is killed to prevent it suffering, the insurance will not be paid?—A. There is no such rule in the Canadian Insurance business. I know of no such rule existing anywhere and I am sure it does not exist in Canada.

Q. If it existed in the States you should know it, as you are a shipper from the American ports?—A. I do not think it exists anywhere.

Q. Are the cattle as well treated and taken care of from American as from Canadian ports?—A. I think they are.

Q. And the inspection is just as good?—A. The inspection is very good in the American ports, but it is only recently they have started any inspection there.

Q. Many of the steamers sailing from here carry passengers as well as cattle?—A. Certainly. In fact the Dominion and Beaver Lines carry a large number of passengers on the cattle boats. I know of a great many who prefer to make the voyage on a cattle steamer.

Q. If the Beaver and Allan Lines abuse the cattle in the way certain newspapers and other correspondents and other writers say, is it likely they would get passengers to go on the cattle boats?—A. They would not get passengers, and they do not abuse the cattle to that extent.

Q. Do they abuse the cattle at all?—A. No. I believe the cattle are better taken care of than the steerage passengers.

Q. Do you know anything about the statement made to the effect that a percentage is given to the men in charge of the cattle for landing them alive?—A. There is no such thing done in Canada.

Q. And in your shipment of cattle from the States, you never gave that percentage?—A. No.

Q. Do you believe that system exists in the United States?—A. I do not believe it exists there, and I am sure it does not exist here.

Q. So that the men in charge of the cattle would have no object in prolonging the life of an animal that had been maimed or injured for the purpose of getting it on shore alive to get this insurance?—A. Not at all.

Q. If an animal's back or leg is broken, it is put to death, is it not?—A. If an animal's back is broken, it is the duty of the foreman in charge to slaughter it there and then and save the salvage for the underwriters.

Q. Are the foremen in charge of cattle under special instructions to this effect?—A. Yes, they are under special instructions.

Q. Would the shipper have any interest whatever in prolonging the life of an animal that was maimed, so that it would be landed alive?—A. None whatever. On the contrary, he would prefer to have it killed than to have it arrive in such a condition that he could not sell it.

Q. An animal would be worthless if it arrived in that condition?—A. Yes.

Q. In some of these papers and correspondence given by Mr. Plimsoll, they speak about the men in charge preventing the animal from lying down, by pouring paraffin oil in their ears and putting hay in their ears and setting fire to it. Is there any truth in that?—A. None whatever. It exists only in the imagination of some person of an over-fertile brain.

Q. Is there any object in keeping the cattle from lying down?—A. None whatever. On the contrary they thrive better if they are lying down sleeping. Every

foreman in charge of cattle likes to see the animals lying down when they have got their meals.

Q. Are these cattle regularly fed on board the boats?—A. Yes; they are fed just the same as in the stables—twice a day.

Q. And do not the animals sometimes improve on the journey across to England?—In summer voyages they improve, but during rough passages they depreciate.

Q. But during the summer months the cattle improve going across the Atlantic?—A. In some cases they do if they have fine weather.

Br. Mr. Smith :

Q. Could five stockers lie down in the space allotted for four fat cattle?—A. They can.

Q. Could four distillery cattle lie down in a space of 2 feet 6 for each?—A. They could do it, but if they had a space of 2 feet 8 they would be more comfortable.

By Mr. Greenshields :

Q. There is no insurance paid on the depreciation on the animals going across?—A. No.

Q. So that any depreciation by ill-treatment or want of proper feeding falls upon the owner of the cattle?—Yes.

Q. His interest, therefore, is to have good men in charge of the cattle?—A. Yes; his interest is to have good men in charge of the cattle and to have the animals well taken care of and landed in the best possible condition on the other side.

By Mr. Smith :

Q. On this boat you went over on in December, were cattle carried on the upper deck?—A. Yes.

Q. Do not some of the steamers stop carrying on the upper deck in winter?—A. I think the Allan and Dominion Steamers do not ship on the upper deck in winter, but the Beaver and other lines do.

Q. Do you think the animals suffer from the cold in winter?—A. I do not think they suffer so much from the cold as from the spray. They suffer from the spray to a certain extent, and also there is additional danger of their being washed overboard. Perhaps it might be cold on the voyage for a day or two, until they get away from the coast.

By Mr. Greenshields :

Q. As a matter of fact, the farmers in this country do not bring their cattle in from the fields until the 15th or 20th of November?—A. In some parts of Ontario and on the North-West ranches the cattle are left running outside all winter.

Q. And in the Province of Quebec the farmers do not think of putting the cattle into the stables until the 15th or 20th of November?—A. That is so. The cattle do not suffer from the cold, but they may suffer from the spray.

By Mr. Smith :

Q. If permanent fittings were put on these upper decks it would remove the objection you have to cattle suffering from the spray?—A. Exactly.

Q. And you think that cattle could then be taken across the Atlantic, without any cruelty or suffering any more than is incident to a sea voyage, where many passengers also suffer?—A. Yes. The cattle are taken over, up to the 15th September, without any cruelty or suffering, and if the suggestions we have made were carried out, they could be taken across up to the close of navigation without any suffering.

Q. Some witnesses who have appeared before this commission have endeavored to give the impression that the losses of cattle in the instances mentioned was due to the want of a sufficient number of cattle men or to the fact that they did not properly take care of the cattle. Could the cattlemen do anything to save the animals

from being washed overboard?—A. Nothing whatever. I believe that no cattle are lost through the carelessness of the cattlemen. The men in charge of cattle might be negligent on board ship in feeding and watering the animals, as they might be in the stables, but we have good foremen to see that the attendants do their duty. If a sea breaks over a steamer and washes away everything, nothing could keep the animals on board.

Q. And suppose there was not sufficient air between the decks when the hatches are down, the cattle men could do nothing to save the animals?—A. They could do nothing. The hatches dare not be opened in a heavy sea.

Q. Would the animals suffocate in such a case?—A. Yes, unless they had steam fans on board.

Q. Steam fans would do away with all the difficulties in this connection?—A. Yes.

By Mr. Greenshields :

Q. There is no difficulty whatever, in properly constructing a ship so as to give sufficient air to the cattle between decks, when the hatches are battened down?—

A. There is no difficulty in carrying on this cattle business successfully, and from a humanitarian point of view also.

Q. What is the percentage of stockers to fat cattle on board these steamers?—

A. In many steamers the stockers are about 70 per cent.

Q. These cattle are sold to the British farmers?—A. Yes, and they are taken into the interior of the country for fattening purposes. He puts them on his pastures in summer, and in a stable in the winter time, and then fattens them and sells them as beef cattle.

Q. This cattle industry is growing every year since its inception?—A. It is growing every year since 1870.

Q. What would be the effect on the port of Montreal, and on the country as a whole, if we were prevented from exporting live cattle to England?—A. In my opinion, the effect would be disastrous. In the first place it would take away three-fourths of the steamers from the port of Montreal, and it would virtually ruin the whole country.

Q. The effect of it would be ruinous to the farming community as well?—A. It would be disastrous to the whole Dominion, so much so that I do not think the people of the Dominion would stand any such legislation.

By Mr. Smith :

Q. Is there a ready sale for these "stockers" in England?—A. They are in great demand in England and Scotland and especially in Aberdeen, Dundee and Newcastle, England.

Q. If these cattle were injured on the voyage they could not be sold very readily?—A. If they were injured very much they would sell for far lower prices than if they were not injured. A farmer would not care about taking into his stables two or three hundred cattle badly damaged in crossing the ocean.

Q. And the Canadian shipper is more interested in landing his cattle in good order than the American shipper?—A. Certainly. The American cattle are slaughtered immediately for beef. Our stockers could not be used for beef if they are injured. They are only skin and bone when they arrive on the other side, and they are fattened by the farmers there.

By Mr. Greenshields :

Q. What is this disease called "red water" which is spoken of by Mr. Plimsoll in his book?—A. It is a disease peculiar to American cattle, which we have not in this country at all.

Q. None of our cattle suffer from that disease?—A. We have none of it in Canada. In fact we have no cattle disease of any kind in Canada.

By Mr. Smith:

Q. Would it injure our trade if the British Government should allow American cattle to be taken in the same as our cattle?—A. It would injure our “stocker” trade.

Q. Would it reduce the price of the animals?—A. It would increase the number exported and would naturally reduce the price.

Q. I suppose the Americans would like to obtain this privilege?—A. The Americans, I think, would like to have their cattle allowed into the interior of England and I have no doubt some British farmers would like it, as it would give them a larger supply of “stockers” for fattening purposes than they have at present.

Q. The British farmers make a good business out of fattening the Canadian cattle?—A. They are making a very good business of it since your friend, Colonel Innes, of Aberdeen, started that trade. If the American “stockers” were allowed into England it would certainly reduce the value of our “stockers.”

Q. When you ship cattle from American ports I suppose you find they are of far less value on account of their having to be killed in England?—A. Yes; and if Canadian cattle are shipped from American ports they are treated as American cattle in England.

Q. The same vessels that carry cattle from Montreal in summer go to the American ports in winter?—A. Yes, very frequently.

Q. If the space for each animal were regulated at 2 feet 8 in Canada would that not be suitable for animals exported from the United States ports?—A. I think the Americans would prefer the 2 feet 8 space also. The Beaver Line steamers have permanent fittings at 2 feet 8, and they carry cattle from the States. Some of the Donaldson line boats have the same, and I think the Allan line boats also. There would be no inconvenience or loss to the ship owners, if the American steamers were fitted up in the same way.

Q. But suppose some of the American steamers were fitted up in 2 feet 6-inch space?—A. It might place some of the Canadian ships at a slight disadvantage.

Q. Would not the cattle owners prefer to ship on a vessel fitted with permanent stalls of 2 feet 8 inches each?—A. Yes; they would give a higher price.

Q. So that it really would be no loss to our Canadian vessels?—A. It really would be no loss.

Q. The shippers would soon get used to the larger stalls and they would take these steamers in preference to vessels fitted up with 2 feet 6 inches space?—A. Yes.

Q. Have the Allan boats a 2 feet 8 inches space?—A. I think a number of them have permanent fittings at 2 feet 8, but such as have not, use a 2 feet 6-inch space from the American ports.

By Mr. Greenshields:

Q. Have you read this book published by Mr. Plimsoll, which has been filed as an exhibit in this enquiry?—A. Yes.

Q. You read the correspondence in that book about firing the cattle and stuffing hay in their ears?—A. Yes.

Q. Will you state from your knowledge of the cattle shipper how much truth there is in the statement contained in that book, and in the letters copied into that book, with regard to the cattle trade from this port?—A. In my opinion, there is no truth whatever in it, so far as it applies to the Canadian cattle business, and I do not think there is any truth in it with regard to the American business. I am positive there is not a word of truth in that book, so far as it applies to the Canadian business, as such a thing as putting hay into the ears of the cattle and setting fire to it was never known or heard of in connection with the cattle business here.

MR. SMITH.—It is some American who writes that to a London paper.

MR. GREENSHIELDS.—And you do not think there is any truth in it with regard to cattle shipped from the United States?—A. I do not think so, because I think a man would be put in irons on board ship, if he were even to light a match in the hold of

a vessel, where there are two or three feet of hay and straw; why, if such a thing as that were allowed, every vessel crossing the Atlantic would be burned.

Q. Do you know whether it is not a fact that more vessels have been lost crossing from England to Canada when they have no cattle on board, than in crossing from Canada to England with loads of cattle.—A. I believe that a far greater number of cattle vessels have been lost coming from England to the Port of Montreal, than have been lost going from Montreal to England.

Q. The conclusion you draw from that is that the carrying of cattle is not dangerous to the navigation of the ship?—A. It certainly is not.

By Mr. Smith:

Q. Do you think that cattle is a more dangerous cargo than any other cargo?—A. Probably cattle may interfere a little with handling the ship unless they have permanent fittings covered in, so that the sailors could walk on the top of them. I understand that the regular liners are now building vessels for the cattle trade, entirely covered in, and which have all the improvements suggested by us. I think Mr. Torrance of the Dominion Line is building a new cattle ship at present. I think that if the Government appoints an inspector here, many of the abuses will not occur, because the certificate of the ship would be suspended, if she were not found seaworthy for carrying cattle. Most of the vessels when built originally were not built exclusively for the cattle trade. They were built for other purposes and had the cattle trade as it were pitchforked upon them.

By Mr. Greenshields:

Q. In the event of a law being passed in England preventing the importation of cattle, could dressed meat be shipped from Canada to England at a profit?—A. We cannot ship dressed meat from this country, because the dressed meat trade requires fat cattle, and we have not got the corn here to feed them. We do not grow corn in Canada and we are not allowed to bring it in free of duty for feeding purposes. The dressed meat trade has been tried in Canada and found a failure. If this law were passed in England, it would simply cut off our trade altogether, because we could not compete with the American fat cattle.

Q. Have we any other market than England for our cattle?—A. We have no other market than England at present.

Q. We had another market for our stockers at one time?—A. Yes, until the McKinley Bill was passed.

Q. And now Great Britain is trying to get a double back action on Canada by the Plimsoll Bill which is worse than the McKinley Bill?—A. Yes; the Plimsoll Bill is absolutely worse than the McKinley Bill.

Q. Which of the two would you prefer, the Plimsoll Bill or the McKinley Bill, in so far as they would injure the country?—A. I think we would prefer the McKinley Bill. I think there is more sound sense in the McKinley Bill than in the Plimsoll Bill.

Q. As a matter of fact, if the Plimsoll Bill is carried into effect the Canadian farmer will lose his market for cattle?—A. If such a bill were put into force in England, it would simply cut off the trade of this country, and there would be nothing left open to us but annexation to the United States. We do not believe the people of England would ever allow such a bill to pass. I believe that if it did pass there would be nothing left for this country but Independence, or annexation to the States. It would cut off the whole trade of the country and the farmers of Canada would feel its effect from one end of the Dominion to the other. The raising of cattle is the only profitable industry left us now, since the timber trade has declined.

By Mr. Smith:

Q. You do not advocate Annexation of course?—A. I do not. We are all loyal British subjects in this country.

MR. JAMES ALLAN—You have made the statement that in your opinion, no ship of less than 250 horse power should be allowed to carry cattle from this port?—

A. Yes, sir.

Q. Can you state how you arrived at this conclusion?—A. In looking over the Register of the boats which have lost the cattle, we are afraid that vessels with less horse-power could not run away from a storm. The Allan Co. who have much more experience, can answer that question better than I can. It is simply a suggestion which we made, and I am not very well posted on the question of the horse-power of steamers.

Q. Should there not be some proportion between the horse-power and the size of the vessel? Three or four hundred horse-power on certain vessels would be useless?—A. That is the reason we have stated, that the vessels should not be less than 1200 tons, and should not have less than 250 horse-power.

Q. That is the proportion you would establish between the horse-power and the size of the steamers?—A. Yes.

Q. Would not that exclude a great many steamers from coming to the port?—A. A very few.

Q. Are there not a great many steamers, whose horse-power is much less in proportion?—A. Not many. I think there are only a few, outside of the tramps. I know none of the regular liners which it would cut off.

By Mr. Smith:

Q. You do not think it would be a great evil if a few of those old time "tramps" were cut off?—A. I think it would be to the benefit of the cattle trade in general, if some of these "tramps" were got out of the cattle business. I think there are quite enough good steamers on the regular liners, and quite enough good tramps to carry all the cattle we need from this country.

This concluded the evidence of the witness.

Mr. Bond, representing the marine underwriters, files correspondence of which the following is a copy in relation to "S. S. Kehrwieder."

"ASSOCIATED CATTLE UNDERWRITERS.

"It having come to the knowledge of the members of this Association that animals were jettisoned unnecessarily, alive, from the S. S. "Kehrwieder":—It was decided that the names of the foremen in charge of the various lots of animals which were thus thrown overboard alive during this vessel's last passage from this port, be ascertained with the view of declining to write on any shipments under their charge hereafter; and that their names be communicated to all interested. And it is the unanimous decision of the members of this Association that animals under their charge hereafter shall not be insured by any member of this Association. And further that the members of this Association do not consider that the officers of the vessel are free from blame in permitting live animals to be thrown overboard, that therefore no live stock be written by any member of this Association on this vessel until after this matter is settled satisfactorily to this Association.

"E. L. BOND,
"Secretary."

"20th October, 1887."

MONTREAL, 24th October, 1887.

E. L. BOND, Esq.,

Secy. of the Associated Cattle Underwriters,
City.

SIR,—We have just received a copy of a circular bearing your signature as Secretary of the above Association dated the 20th inst., in which charges are made

against the officers of "S. S. "Kehrwieder" with respect to their conduct in jettisoning unnecessarily the cattle shipped during her last voyage from this port.

Any such statements in this circular concerning the officers of our vessel are utterly false and libellous.

These statements have already most seriously affected the vessel in question, and they are calculated to, and will, cause the greatest possible damage in the future, not only to the vessel herself but to the whole of the line to which she belongs and for this damage we are advised that the members of your Association are personally liable.

We must request that you at once retract in the most formal manner the injurious and libellous statements which you have made, and that you give the same publicity to this retraction that you have already given to the circular which we complain of.

This we demand as a matter of right and also that it be done without delay as we have already suffered serious damage from these statements for which we will hold you and your informer strictly accountable.

We also demand the name of your informant and hold him as well as you responsible.

We are, yours respectfully,

MUNDERLOH & Co.
Agents Hansa Steamship Co.

MONTREAL, 28th Oct., 1887.

Messrs. MUNDERLOH AND Co.,
Steamship Agents, City.

GENTLEMEN—*re* S.S. "Kehrwieder",—Your favour of 24th was placed before the Associated Cattle Underwriters' Committee this morning. I am now requested to say:—

The circular you refer to is no doubt one that was issued to the Companies forming the Committee for their information only.

The only reference to your Company is as follows:—"The members of this Association do not consider that the officers of the vessel are free from blame in permitting live animals to be thrown overboard, and that therefore no live stock be written by any member of this Association on this vessel until after this matter be settled satisfactorily to this Association." The Committee are of opinion that from the evidence they hold the above action is fully justified, and it is their intention to give the officers of the vessel as full an opportunity as they could wish for, to reply to the charges. Meantime they see no reason to retract anything as stated above.

It was and is how their intention to consult you regarding the proposed investigation, and I beg on behalf of the Committee to disclaim any intention to be discourteous or unjust either to you personally or to the Company.

Yours faithfully,

E. L. BOND,
Sec. Assocn. Cat. Undrs.

(Copy.)
Messrs. MUNDERLOH AND Co.,
City.

MONTREAL, 5th Nov., 1887.

GENTLEMEN,—In reply to yours of to-day I beg to hand you statements made by three of the cattle men, who were in charge of cattle on board the "Kehrwieder" on her last voyage from Montreal, which you will see are very circumstantial and such as this Association was called upon to take cognizance of. As the vessel is now

in port this Association is willing to hear what the officers have to say respecting these statements, and for that purpose will meet them to-day or some other time as may be most convenient to all. This Association considers its course perfectly justifiable in face of the statement furnished it.

Yours faithfully,

E. L. BOND,

Secretary.

MONTREAL, 5th Nov., 1887.

E. L. BOND, Esq.,

Sec'y Associated Cattle Underwriters,
City.

DEAR SIR,—In reply to your request this morning that your Association should be allowed to make an investigation in regard to the S.S. *Kehrwieder*, we desire to repeat our former protests against the previous action of your Association, but while doing so, we will throw no obstacle in the way of any investigation which you may be pleased to make, provided we are represented at such investigation and that it is distinctly understood that in consenting to this investigation, we merely do so at your request and for your satisfaction and without waiver in any respect of our rights against your Association for damages. We are.

Yours truly,

MUNDERLOH AND Co.,

Agents.

MONTREAL, 7th Nov., 1887.

Messrs. MUNDERLOH & Co.,
City.

GENTLEMEN,—*Re* "Kehrwieder." In connection with the correspondence that has passed between us. I beg to advise you that the Cattle Underwriters having heard the report of the statements of the Captain and Mate of the "Kehrwieder," have decided to accept risks on cattle by her, if they are offered to them, subject to their ordinary rules and regulations.

Yours faithfully,

(Signed), E. L. BOND.

Sec., C. U. Asstn.

COPY OF OPINION OF N. W. TRENHOLM *re* S.S. "KEHRWIEDER."

DEAR SIR,—I am of opinion that the Insurance Association were justified by the information before them in taking the action they did by the circular issued to the members of the Association, and that no damages could be recovered against them for issuing such circular.

On the other hand—having now heard the statements of the Captain and Mate of the vessel and also of the cattle foremen:—I am convinced that the statements of the three cattle men acted on by the Association, viz: Byrne, Knapman and Campbell, will be so far contradicted and impaired by a greater number of witnesses whose evidence whether true or false, is likely to have as much weight as theirs, that I would not advise the Association to continue in so serious a course as to refuse to accept risks by the above vessel or to refuse payment of the insurance in the hands of the Banks or third parties holding the insurance certificates. The charge of having thrown overboard cattle that ought not to have been thrown over is however so much more serious against Gattins acting for Mullins and Cook, and the loss so large, that it would be desirable that the settlement of this loss

should be delayed for further investigation specially, if Gettins and Mullins and Cook are not good for the amount. I would advise in all cases that payment be made only under reserve of all risks, and if possible subrogation against whomsoever may be responsible for the wrongful loss, if it is established so to be in the future.

I enclose a form of receipt which might be used even if the subrogation clause is omitted and payment made only under reserve of all rights against those responsible, the insurers will have a perfectly good action against these to recover the amount paid if it be proved in suit that cattle were wrongfully jettisoned as stated by the three cattle men referred to. In fact, all rights remain intact, if any, to recover both from shippers and ship. As to the liability of the ship, it is very doubtful if she could be held, even if the action proved well founded against the shippers, as it would appear that any wrongful throwing overboard of cattle was done without the knowledge of the officers, who no doubt were largely in the hand of the cattle men in the matter and much allowance might be made for them under the circumstances of the case. There is, however, a sufficient presumption of truth in the statements submitted for the wrongful and fraudulent conduct of Gettins to justify immediate action against him and his employers, and the fact obtaining in such suit would make or enable one to judge of the liability of the other shippers and of the ship. It must not be forgotten, it is not necessarily what is the truth in this matter that will prevail, but what will be sworn to on either side and how the balance of evidence is likely to stand after both batches of witnesses have been heard.

Yours truly,

(Signed), N. W. TRENHOLME.

CORNELIUS COUGHLIN, of the city of Montreal, cattle exporter from Canada to Great Britain, and member of the Dominion Live Stock Association, gave the following evidence:

By Mr. Smith:

Q. What is your opinion in reference to the export cattle trade. Do you agree with all that Mr. Bickerdike has said, or have you any views of your own separately?—A. It is quite possible I may have some separate views of my own.

Q. Do you think there should be Government supervision of the loading of cattle?—A. Yes; there certainly should be Government supervision.

Q. You think that the present supervision by the underwriters is not sufficient?—A. I believe it is good enough as far as it goes, but they have no powers to enforce any regulations that they may make. It is a matter of business only.

Q. You would prefer to have all the regulations issued by the Government?—A. Yes; and furthermore the Government should define as many of them as possible and leave as few as possible of them to the option of the inspector.

Q. So that everyone reading the regulations would know what they were at once?—A. Exactly.

Q. Do you think it would be a good plan to have an Act of Parliament passed without any regulations, and then make the regulations by Order in Council afterwards, so that changes could be made in them year after year, as the necessities of the trade require?—A. Yes; they may have to be changed not only year after year, but week after week.

Q. You just approve of the plan I had prepared for the Government before this investigation took place?—A. Yes; I was in Ottawa and I heard your suggestions, and I quite approve of them.

Q. What do you think as to the space which should be allowed to each animal on board ship? There is a difference of opinion as to whether 2 feet 6 or 2 feet 8 should be allowed?—A. I am strongly of the opinion that the space for each animal should be 2 feet 8 inches. I believe that the space should be defined by a Govern-

ment regulation, for at present it is optional, and there is room for a good deal of differences of opinion on the matter. The steamship owners think one thing and the cattle shippers think another, and the Government inspector might think something else. We ought to get the best evidence we can on the matter, and fix the space by Government regulation. I think the space should be 2 feet 8 inches. The cattle shippers have all agreed that 2 feet 8 inches should be the space.

Q. It would be well to make the regulation 2 feet 8 inches?—A. You can make no mistake by making it 2 feet 8 inches, whereas you might make a mistake if you made it only 2 feet 6 inches.

Q. And you agree that there should be five stockers in the space of four fat cattle?—A. Yes; I know that five stockers would have sufficient room in the space for four fat cattle.

Q. Do you agree with Mr. Bickerdike in what he said about the alley ways being kept clear, and about cattle being carried on the hatches of steamers?—A. I agree with what he said in every respect, except as to leaving the matter to the option of the inspector, as to what hatches should carry cattle, and what hatches should not carry them.

Q. You would prefer a fixed regulation on that point?—A. Yes. If it is decided that some hatches would carry cattle, let it be defined what hatches and what parts of them, but do not leave it to the decision of the inspector. There has been rather too much of that already.

Q. Do you think it would be any hardship to the shipowners to prohibit the carrying of cattle on the hatches?—A. It would reduce the carrying capacity of the steamer to that extent.

Q. But it would cause other matters to work much better?—A. Precisely so. There seems to be a misunderstanding as to the reasons why cattle should not be carried on hatches. The cattle on the hatches are fully as comfortable as cattle on the other parts of the boats, and I think they are more comfortable in hot weather. The reason they should not be carried on the hatches is in order to give more room for handling cattle, and the hatches should be used as an hospital, suppose a bullock got injured in any way.

Q. As a rule you are against the principle of carrying cattle on the hatches?—A. Yes.

Q. You think the hatches should be reserved for other purposes than for carrying cattle?—A. Yes.

Q. Do you think there should be a rule made by the Government that the captains of all vessels carrying cattle should have experience and knowledge of the trade?—A. Yes, I think that should be a Government rule. It will not affect the regular liners in any way, and it would only affect the few "tramps" which should be so affected. I think the principal deficiency in outside steamers is the want of experience of their captains, as was the case with the steamship "*Linda*." If an outside or transient steamer is fitted up according to the regulations of the Government, and has an experienced captain, and is qualified to carry cattle in every respect, I cannot see why she should not be allowed to carry cattle as well as if she were a regular line.

Q. Do you think that some of these losses have occurred because of want of experience on the part of the captain?—A. I think so. I do not want any law to be made for regular liners, and another for outsiders. I think there should be one law for all and that they should all be made to comply with it. Of course on the regular liners, captains all have experience in the trade.

Q. You think it would not shut out many "tramps" if a law were made, that the captains should have experience in the cattle carrying trade?—A. I do not think it would shut out many of them.

Q. I see your Association recommend that something should be done to prevent groundless suspicion on the other side as to animals suffering from pleuro-pneumonia, as was the case in connection with the cargoes of the steamship *Norse King* and the steamship *Corean*. How do you propose to meet that?—A. That is merely a recom-

mentation to the Canadian Government that they should take some steps in that connection with the British Government.

Q. The Canadian Government have done everything that is possible in that connection. Our Canadian High Commissioner in London took immediate steps to prove that these animals did not suffer from pleuro-pneumonia?—A. The object of that recommendation was, no doubt, to raise a discussion on the matter and to draw greater attention to the fact that these animals were detained without cause.

Q. Have you any recommendations to make in reference to these matters?—A. No, we are quite satisfied that the Canadian Government is doing all it can in the matter, and we merely wish to draw attention to the fact that there is no ground for such suspicion.

Q. Do you think it would be a good thing, if freight was collected only on the number of animals landed?—A. I think it would be a very good thing, but I do not think it would be wise for the Government to make any regulation in that direction. If the steamship companies would agree to such a proposition, I think it would be quite an improvement, but the Government could not step in and say to the steamship companies—you must do this.

Q. Are the men going over in charge of cattle treated as well as the intermediate passengers, in your experience?—A. I heard it stated yesterday by a steamship agent that the men were well treated, but we deny that. If steamers treat the men at present, as well as intermediate passengers as they say they do, it will be no hardship on them if a regulation is passed to say, they must do so. We deny that it is a fact that the steamship companies give them good accommodation.

Q. What kind of men generally go over in charge of cattle? Are they farmer's sons, or are they men from the city?—A. Our foremen are experienced men, who have been for several years in the trade. I have been shipping cattle since 1887, and I have some foremen with me for the last ten years in whom I have the fullest confidence in their ability to take charge of my cattle. If I had not confidence in them I would not let them have the position.

Q. You think that a great element in the safety of cattle going across the Atlantic is the securing of first-class foremen?—A. I think it is in the interest of the shipper to land his cattle in good condition, and to do this he must have good men in charge.

Q. How many foremen do you have?—A. I would have one foreman to a certain number of cattle on the ship. It is very seldom that a shipper loads a whole boat, and each man who ships cattle on a boat has a foreman. One foreman sometimes looks after the care of two or three hundred head of cattle.

Q. Would you have a foreman for every two or three hundred head of cattle?—A. I would have a foreman for all the cattle I shipped.

Q. Is there any rule as to the number of foremen or cattle men that should be put in charge of a certain number of cattle?—A. I do not think so. I think the fact that the cattle shipper is the interested party, is quite enough to ensure him putting the requisite number of good men in charge.

Q. Supposing you had 300 head of cattle on a steamer, how many foremen would you have in charge?—A. If I shipped 300 head of cattle I would have one foreman, and if I only shipped 50, or 60 or 100 head of cattle, I would likely have a foreman also. Sometimes when small numbers of cattle are shipped by different exporters, two or three join together and engage a good foreman. It is not necessary that the under men should be men of great experience or great intelligence. If a foreman is posted in his business, and knows his business thoroughly, he can look after the cattle well, and all that the other men have got to do is to do what they are told. It does not require any great intelligence to do that.

Q. If the men were seasick what would the foreman do?—A. They are not green hands. They are men who follow the business regularly.

Q. You do not trust to taking them up at the last moment?—A. Not at all. We have our regular men as foremen and assistants. There are cases where it sometimes happens that we have got to take a few men as we get them on the wharf, but

even if those men were seasick and did not work we would have sufficient men without them to take care of the cattle. The shipper that did not provide proper men to look after his cattle would have no common sense, and I do not think he could continue in the business very long, because his interests all centre in landing the cattle in good condition.

Q. You think these cattle men should all sign articles?—A. Yes, they ought all be amenable to the orders of the captain.

Q. You think these cattle men should all sign the ship's articles?—A. Yes, they ought all be amenable to the orders of the captain.

Q. They should be subject to the discipline of the ship?—A. Yes, that far and no farther. The suggestion made by a steamship agent to take the management of the cattle men out of the hands of the shippers is one which I resent as an insult to the cattle shippers in this port.

Q. You want to engage your own men?—A. Yes, and I think we are quite capable of conducting our own business. It has been suggested here by Mr. Reford that the management of the cattle business should be handed over to him. I do not think that any of the other steamship agents or owners agree with him in that. He is of opinion, however, that he could manage the cattle business much better than the cattle owners are doing it, but the evidence, so far as it has gone, has shown that there would be better grounds for the cattle exporters to ask the power to manage Mr. Reford's ships. I can prove this. We asked for particulars of the complaints he made about the cattle men, and he declined to give these particulars, whereas we have particulars which we can give. Of course, we do not claim that the management of Mr. Reford's ships should be handed over to the cattle shippers, but I say that the evidence shows that we have better grounds for asking that, than he has for asking for the management of the cattle exporter's business.

Q. Have you lost any cattle in your shipments?—A. Occasionally I lost a few.

Q. Have you met with any heavy loss?—A. No, I have never met with any heavy loss of cattle.

Q. Do you ascribe that to the judgment you use in selecting your ships?—A. I do not know that I can, it just happens so.

Q. Do you ship cattle by transient steamers?—A. Occasionally I ship some by "tramps." It is a question of the price of space. If space is cheaper on the "tramps" I would ship with them. It is all a matter of business, but I would not pay so much for the space on "tramps" as I would on the regular liners.

Q. Would you rather give a little more on the regular liners?—A. Certainly I would.

Q. Do you think that the business as managed by the regular liners is quite satisfactory?—A. Yes, as far as the transportation from Montreal to Great Britain is concerned, I do, but as far as the management of the loading in Montreal is concerned, I do not.

Q. What is your objection to the manner of loading in Montreal?—A. The whole complaint is connected with the loading of the steamships and the accommodation on the wharfs. The steamships may not be to blame for the whole of it. There are several parties to blame and which I shall try and explain. In a great many cases, the cattle are driven from the railway yards to the steamer, through the streets of the city during the day, and there is a great deal of traffic on these streets coming from the Grand Trunk. They have to be driven over the canal bridge, which is very often open to allow boats to pass through. This causes a blockade and the carts get mixed up with the cattle and the confusion that takes place can hardly be described. There is great cruelty to the cattle in driving them through these streets when they are thronged with other traffic.

Q. Whose fault is that? Could not the cattle owners control it and make some other arrangement?—A. No. The great trouble is, that there is not enough room on the wharf during the day time for loading cattle, and the cattle have to be driven through the streets to the ships. There are several parties to blame in this matter.

Q. Suppose you have cattle for shipment, what is to hinder you from driving them down at 6 in the morning?—A. Nothing whatever, but that would not remedy the evil.

Q. Why do you not do so?—A. I do so, when the boat is ready to take the cattle on board, but in a great many cases the boat is not ready for the cattle, and if I drive them down to the wharf at 6 in the morning, and the boat is not ready until 3 in the afternoon, they would have to remain on the crowded wharf and in the hot sun all day, and it would be a very dangerous thing to do that. Not only would it be dangerous, but it would not be practicable. There is not room enough on the wharf to take railway cars down in the day time and therefore the cattle must be driven down. I do not know of any other port on the continent of America in which cattle are driven to the wharf to be loaded on the steamer. I have shipped cattle from Boston and New York. In Boston they are shipped direct from the railway cars to the steamer, and in New York they are taken to the steamer on lighters. There is a great deal of cruelty to the animals by this system we have in Montreal. Again, when they are driven down to the wharf, they cannot be all loaded on the steamer at the same time, and some of them must be held over, while others are being loaded. Those that are held are left on the wharf, where there is not sufficient room for the other traffic without them, and while they are on the wharf, heavily laden wagons come along and have to plough a road through these cattle. That causes a great deal of cruelty to the cattle. In that book of Mr. Plim-solls which has been referred to, the evils are all imaginary, but there are some real evils and we should devote a little attention to them. This system of loading cattle in Montreal, is a real evil and it should be remedied at once, for if it is not remedied we will drop into the same rut when navigation opens again and the cattle will continue to be driven through the crowded streets. These are preventable evils, and they can be remedied.

Q. Have you ever spoken to Mr. Bulmer, the Chairman of the Harbour Board, in reference to this matter?—A. Yes, this matter has been agitated by the cattle owners for some time. They have agitated it through the press and they have called public meetings. They brought the matter before the Harbour Commissioners, and the Chamber of Commerce took the question up, and asked the Mayor to call a public meeting of interested parties. The Mayor did so, and we had some very nice speeches and passed some very nice resolutions, but there the matter lay and the teams kept driving through the cattle on the wharf all the same.

Q. Was this meeting held on the 2nd of October?—A. Yes, I think so.

Q. Did you hear Dr. McEachren say that the proper inspection of cattle under existing circumstances was very difficult?—A. Yes.

Q. Did you hear him say this: "In fact some cattle were shipped without being inspected at all, which was caused by there being so many different places, we had to inspect them in, and by their coming in at all hours, day and night. It was impossible to make a satisfactory inspection. Some change must be made and what they wanted was a central stockyard where all the animals would be concentrated." Did you hear that speech?—A. I did.

Q. Can it be possible that this is correctly reported and that cattle are put on board steamers, without being inspected?—A. I do not know.

Q. Did you hear him state that?—A. Yes.

Q. You all agreed at that meeting that there should be a union stockyard?—A. Yes, but no action has taken place on the matter. Something must be done to remedy the present state of affairs.

Q. Could not you organize a joint stock company to purchase a stock yard?—A. If we had stock yards—union stock yards—it would remedy a great deal of the evil, but that would not remedy the grievance on the wharf.

Q. What you object to is the driving of cattle along the wharf to put them on board the steamers at different points?—A. Yes; there is no room for them on the wharf. They should go to the wharf in cars, but as the Harbour Commissioners stated, they cannot at present bring cars on the wharf during the day time for want

of room. This matter should be taken up before the opening of navigation. One regulation should be made at once, and that is that cattle should be loaded when the other cargo is completed. It would be better to load the cattle at night, but there is considerable difficulty in loading them on a dark night. The proof that this matter can be remedied, is that it has been done before, and the North-West cattle are now brought down on the cars and loaded direct on the steamships. There is a gangway built from the cars into the steamer, and the cattle are properly loaded. The reason is that the North-West cattle, will not stand any fooling. If they do not have proper arrangements made for them, they break away and it is no easy matter to recover them. These cattle are delivered at the C. P. R. stock yard, and brought down to the steamer on the cars, and a gangway is made to run them on board ship. They are watered and fed at the stock yards, and loaded directly on the ships.

Q. It is only with reference to the cattle from Ontario that you complain?—A. Yes, the distillery cattle, and the farmers cattle from the west. The reason they are loaded in that way, is that they could not handle North-West cattle in any other way.

By Mr. Acer :

Q. Do not the Grand Trunk Railway do the same thing?—A. Yes; both railways do the same in this respect.

Q. Do you think both railways would bring their cars down on the wharf, if they were requested?—A. It is not a question of finding fault with the railways. I have no doubt the railway companies would agree if they could do it. But there is no room on the wharf to do it.

Q. Is it not a fact that the men themselves, from choice, drive these cattle down to the wharf, for the sake of loading them on board, quickly and before other cattle are loaded?—A. Yes; sometimes.

Q. Do not some men like a little better spot on the ship than others, and they drive their cattle down to try and get ahead of others? Is not that about the size of it?—A. It is not the size of it.

Q. Is it not often the case?—A. I believe it is sometimes the case.

By Mr. Greenshields :

Q. If there are three or four shippers for one vessel, one man drives down his cattle first in order to get a particular place?—A. Yes.

Q. The cars cannot come down to the wharf in the day time?—A. No; they cannot come down except after 6 at night.

By Mr. Smith :

Q. Why cannot the cars come down in the day time?—A. It is a regulation of the Harbour Commissioners, and it is on account of the wharf being filled with other freight. There is a rumour that we are going to have great harbour improvements here, in the dim future, but in the meantime the trade of the port cannot wait.

Q. Could not the steamers go down to the wharf below, and take the cattle on board from the trains there?—A. There is not sufficient accommodation anywhere on the wharf, and a steamer does not want to wait after she leaves her own wharf.

Q. It would appear that the trade had grown beyond the facilities of the harbor to accommodate?—A. Exactly; that is just where all the trouble is.

By Mr. Greenshields :

Q. Is it not possible to build a cattle wharf down at Hochelaga?—A. Quite possibly, it can be built.

Mr. ACER.—That has all been discussed before, and it has been shown that it is a very unsatisfactory arrangement and that the steamers cannot go down to that wharf, and will not go down to it.

Mr. COUGHLIN.—Something should be done to improve matters before navigation opens, that is provided we are allowed to ship cattle at all next summer. I wish

to state also that the loading of cattle, while other cargo is being loaded, is a cause of cruelty to the animals. It is not done in all cases, but it is frequently done and should be stopped. I have seen a crowd of cattle waiting for a ship while cargo has been taken to the steamer, and great suffering was caused to the cattle in consequence. I mention all these facts because this is a good time, I think, to bring up all the matters in connection with this cattle trade. The Harbour Commissioners, the City of Montreal and the Government are interested.

Mr. GREENSHIELDS.—It is either the Harbour Commissioners or the City of Montreal that should provide shipping facilities for the cattle?—A. The cattle shippers claim that if cattle are continued to be shipped out of the port of Montreal, the party whose duty it is to provide the facilities, should do it at once or else give it up. I would not like to say that it is altogether the fault of the Harbour Commissioners.

Q. Do you know if in the proposed harbour improvements there is any provision for the shipment of cattle?—A. I do not, but I have never heard that any special arrangements for cattle were made in the new improvements.

Q. Do you not think it injuriously affects the cattle after they are put on board ship, if they are left standing on the wharves?—A. Most decidedly; and this is the connection which these matters have with this enquiry.

Q. Do you not think that many of the deaths which occur on board ship in the summer months, are caused by the fatigue which the animals suffer in being taken down to the wharves?—A. I could not trace any death directly to that. I know it is very injurious to the cattle, but I have not followed the matter up sufficiently to be able to trace the death of the cattle positively to this.

Q. Did you ever cross in a cattle ship?—A. Not from Montreal, but I have crossed from Boston.

Q. You know the way in which the cattle are loaded from this port?—A. Yes.

Q. Have you ever seen them loaded, heads and tails?—A. Never.

Q. Is it possible to load them in that manner and feed them and take care of them?—A. It is neither possible nor practicable nor reasonable.

By Mr. Smith:

Q. You never saw them loaded at an American port that way?—A. Never.

Q.—Unless a crowd of cattle rushed into a ship for a moment while they were being loaded?—A. Not even then could they get into the ship and stand alternate heads and tails.

Q. It is the interest of the cattle shipper to land his cattle in good order?—A. Most decidedly, and if they are not landed in good order the cattle shipper is the only loser.

Q. The depreciation on the animals is not covered by the insurance?—A. No sir, and therefore the cattle shipper is the only loser in the matter.

Q. Have you read this book of Mr. Plimsoll's?—A. Yes, I have given a good deal of attention to it.

Q. I suppose you learned a good deal from that book, did you not?—A. No, I do not think I learned anything from it.

Q. Do you know whether the statements contained in that book are true as regards the shipping of cattle from this port?—A. I know they are not true.

Q. I suppose sometimes when these cattle are driven down to the wharf there is pig iron and all sorts of cargo there?—A. Yes, and they often get amongst it and cut themselves.

Q. But after they are once on board, you have never seen any cruelty or hardship to the cattle?—A. None whatever.

Q. And you know of no cruelty to them?—A. I know of none. I think they are all right once they get on board the steamer.

Q. You are a large shipper of cattle?—A. Yes.

Q. Have you ever instructed your men not to kill the cattle on board ship if they get maimed?—A. Lately it has not been necessary for me to give the foremen

any instructions, because they are men who have been in my employment for the last 8 or 10 years, and they know as much and perhaps more about the business than I do. I have full confidence in the men, or else I would not give them charge of my stock.

Q. But the men in charge would kill a bullock that is maimed so as to prevent it from suffering?—A. I should think so.

Q. The recovery of the insurance money is not dependent upon the animal dying itself?—A. It is dependent only on the death of the animal through any cause.

Q. If the animal's back, was broken and the animal was landed alive, what would be done?—A. I do not think I could collect the insurance.

Q. But the man would kill a bullock on board ship that was so injured?—A. Yes.

Q. And the insurance company pays the insurance under these circumstances?—A. They pay on the certificate of loss.

Mr. CUNNINGHAM.—The animals have to walk ashore, and if they do not walk ashore the insurance is paid.

Q. You would collect the insurance then, if the animal had a broken back or a broken leg, and it could not walk ashore?—A. Yes.

Q. And there would be no reason why it should be kept alive to get the insurance?—A. No reason whatever.

Q. It is stated in Mr. Plimsoll's book, that the men in charge are instructed not to kill the animal because the insurance companies will not pay, if they do so?—A. Such is not the case.

Q. It would be the interest of the shipper to have an animal killed at once if it were seriously maimed?—A. Yes, and it would be the interest of the insurance company too, because they would get the salvage and they would have to pay anyway, unless the bullock walked ashore. There is no interest for any person to keep an animal alive after it is seriously damaged.

Q. The foremen are also interested in landing the cattle in good condition?—A. Of course they are.

Q. If a foreman landed his stock in bad condition, you would not keep him in your employ?—A. No sir, and I would try to see that he did not get employment from any other shipper.

This concluded the evidence of the witness.

JOHN CROWE, of the City of Montreal member of the Dominion Live Stock Association and exporter of cattle from Canada to Great Britain, gave the following evidence.

By Mr. Smith:

Q. You have heard the evidence of those two gentlemen belonging to your association, Mr. Bickerdike and Mr. Coughlin, do you agree with all they have said?—A. With the greater part of it, yes.

Q. Would you tell us what your views are about this question of the cattle export trade and wherein you differ with them?—A. I differ with them a little in regard to the space that should be allowed for each animal.

Q. How much space do you think ought to be allowed for each animal?—A. I find from experience that 2 feet 6 inches for fat cattle is enough as far as I am concerned, but however I see no objection to taking 2 feet 8 inches if I can get it. That is about the only point on which I differ from them.

Q. Do you think that large cattle can lie down in a space of 2 feet 6 inches?—A. Yes sir, I have seen them all lie down comfortably.

Q. Have you seen two or three of them lying together?—A. Yes, four of them.

Q. All lying down together?—A. Yes, sir.

Q. Are there any other points on which you wish to be examined?—A. I think whatever regulations are made by the Government should be made absolute.

Q. And you would not leave the regulations to the discretion of the inspector?—A. No; the inspector should be there to see that the regulations will be carried out. I would include in the inspector's duty the supervision over the treatment which the cattlemen receive, the feeding and housing should be under the control of the inspector so as to make it compulsory on the lines to feed the men properly. I have heard complaints from men on their return from Europe that they were not well fed.

Q. What lines did you hear them complain about?—A. Well, I have heard them complain about two or three different lines.

Q. Do you recollect the names of the lines they complained about?—A. I do not wish to mention the names, but I will tell you what I found from experience. I can get men to go on the Hansa line without any pay at all sooner than they will go for pay on some of the other lines. That is my experience. They feed the men well and treat them well on the Hansa line. They get good food there and they give them good accommodation on board ship. I do not think any vessel should be allowed to carry cattle that would not feed the men properly, because the men are not able to do their work if they are not properly fed.

Q. But there are different kinds of food for the men; if they give them good plain food, it is often the best?—A. If the men get good plain food that is all they want.

Q. Do you think they would not demand hotel fare?—A. They do not want anything of the kind. I have heard complaints from the foremen that the men were half starved on a certain steamer and not able to do their work. That was on one of Mr. Reford's steamers in reference to which I wrote him a letter.

Q. What was the name of the steamer?—A. It was the "Gerona," and there is the letter of recommendation from the captain of that steamer which he gave to the foreman who made the complaint about the treatment which the men received. I now file this letter and wish it to be put in with my evidence. This is the letter:—

"STEAMSHIP "GERONA,"

"DUNDEE, 3rd December, 1890.

"This is to certify that the bearer, Lawrence Donhahue, who made two voyages with me from Montreal to Dundee in charge of about 500 cattle each time and on both occasions conducted himself to my satisfaction and looked exceedingly well after the cattle in his charge, and landed them in good order.

I can recommend him to anyone requiring the services of a boss.

(Signed)

ALEXANDER ANDERSON,

"Master."

I believe as a rule that the foremen get well fed on board ship. They get an intermediate passage.

By Mr. Greenshields:

Q. The foremen get an intermediate passage?—A. They are entitled to an intermediate passage and they get it.

Q. At which part of the ship do the men get their food?—A. I believe they get fed any place they get hold of it. I have heard of them getting it on boards, without any plates or forks.

By Mr. Smith:

Q. Do they not get an intermediate passage with the foremen?—A. No, sir.

Q. At what part of the ship are the men fed. It is important to know how they are treated on board ship?—A. They are fed at the mouth of the galley.

Q. At the door?—A. Yes.

Q. And no table is laid for them?—A. No table at all, sir. That would be too good for them. They have to eat whatever they can get to eat on a bale of hay, and that is probably the best place they can get to take their meals. Some of the foremen will explain to you how the underhands are fed, later on.

Q. If they signed articles, they would have to get the same food as the sailors?—A. Yes, they would get the ship's rations.

Q. And do you want them to sign articles?—A. Yes, but we want to put our own men in charge of the cattle.

Q. The foremen generally have no complaints?—A. No, sir, as a rule the foremen are well fed.

By Mr. Greenshields:

Q. What class of men do you employ to go as foremen with your cattlemen?—A. We employ first-class men; men that I would rely upon as much as the steamship owners will rely on the captain of their vessel. If the accommodation was better for the underhands a better class of men would be obtained than we have to put up with sometimes at present. Of course, we have to do the best we can when we cannot get men, as we have to secure a certain number. While I am on his subject I might state that I would prefer limiting the number of attendants to three men to 100 cattle, if we could secure better accommodation for the men.

Q. You think that three men would be sufficient to take charge of 100 cattle?—A. Yes, three men under the foreman.

Q. I suppose you would recommend electric lights to be carried by cattle ships?—A. Yes, I would recommend electric lights, but even as it is now I would not put more than three men to 100 cattle. I think it would be a very good thing if we had electric lights on board the steamers.

Q. Would you be in favour of a rule compelling cattle carrying ships to be fitted up with the electric light?—A. Yes, sir. I might state that I think also the feed for the cattle should be supplied by the owner of the stock. I give as my chief reason for that, that I do not think the steamship owners would put sufficient hay on board for the cattle if it were left to their discretion. They would limit the amount of hay put on board so as to make way for other cargo.

Q. I suppose you are afraid they might feed the cattle as they feed the men in charge of them?—A. Yes, sir, I would be very much afraid of that. I think they would put a much less quantity of hay on board than we do now. I sometimes have a difference of opinion with them as to the amount of feed I put on board. I want to put on enough of it on board and they sometimes tell me that I want to put on too much.

Q. I suppose you sell it on the other side?—A. No, sir, I use it for the cattle on the other side.

Q. If you had a certain quantity left over, what would you do with it when you got to the other side?—A. I would sell it. I have put 310 lbs. of hay on a steamer at the close of navigation and the animals went over short of food for one day, as we happened to have a long passage. She was a twelve-day steamer, but she took eighteen days going across.

Q. Then you wish to put more than enough food on board?—A. In the fall months I put plenty of feed on board so as not to have the cattle short of food if there is a long passage. It is better to have too much feed on board than to have the cattle going without anything to eat for a day.

Q. I suppose there would not be much harm if they were only short of food for one day?—A. Not much harm.

Q. How would it be if they were without food for two or three days?—A. They would shrink a great deal in two days. I wish to say now regarding the detention of the steamer "Norse King," when she was suspected of having pleuro-pneumonia on board, that I had 300 head of cattle on this steamer. We made a claim for this delay, and I got a communication from Sir Charles Tupper that our claim should be put in through the Canadian Government and sent to the English Government for

this loss. I may say that the inspector in England cleared the vessel at first, and it was only a second thought of his that he detained them on suspicion of having pleuro-pneumonia. He kept them five days waiting after they were cleared in London, and the inspector of Dundee did not notify the salesmen that they were cleared until two days afterwards.

Q. If you have any claim to make it will be a separate matter from this enquiry altogether, and I presume you will have to make it through the Department of Secretary of State?

Mr. CROWE.—I had 300 head on cattle of the "Straits of Magellan," and I lost £2 a head on them. All the loss I sustained was for want of sufficient insurance. The best of my cattle were all killed; they were nearly all "stockers."

Q. It has been stated that they were in a very poor condition when they landed?

—A. They were in a middling condition, but not in a very bad condition.

Q. You made no loss on them?—A. I lost \$10 a head on the cattle I had not sufficiently insured.

Q. But on the stockers you lost nothing?—A. Not on those that were landed alive. There were 37 cattle lost on the spar deck.

Q. How were they lost?—A. They were washed overboard, and 63 were smothered down below for want of ventilation.

Q. If there had been permanent fittings, as has been described here by the gentlemen who gave evidence, made of 2-inch plank on angle iron frames, and if the vessels were also fitted up with steam fans, do you think those cattle would have been lost?—A. I believe if she had all these improvements the ship would have gone over all right. I think she is a very good steamer.

Q. Is she a large steamer?—A. Yes, sir; and she is a very good steamer.

Q. You think if the vessel were properly fitted up according to the recommendations made to us, a large portion of the cattle on the "Straits of Magellan" would not have been lost?—A. I think so.

By Mr. Greenshields:

Q. A large proportion of the cattle you ship are "stockers"?—A. Yes, sir; and I also shipped about four thousand large cattle this year.

Q. How many "stockers" did you ship?—A. I shipped twelve thousand head of stockers, and that would make sixteen thousand head altogether.

Q. Was it a paying business this year?—A. No, sir; this was a very bad year.

Q. Was it owing to your not insuring sufficiently that you made a loss?—A. No, sir; we bought the cattle at a high price in the spring and the British markets were bad.

Q. It was not from the loss on board ship that you suffered?—A. Not so much as the bad markets. I landed all the cattle I shipped in good condition with the exception of one shipment. I had 88 shipments, and out of these 88 shipments they were all landed in fair or good condition except in the case of five steamers which met with bad weather between the 1st and 12th of November. There was only one steamer in the whole lot on which I could say the animals were landed in poor condition, and that might be due to our having a bad foreman. Whilst we have very good foremen as a rule, still there are exceptions to every general rule.

By Mr. Smith:

Q. You think that if an incompetent foreman were put in charge of the cattle there would likely be a loss?—A. Yes, sir, you can detect right away if there is a bad foreman in charge of the cattle. You could not be in the business long if you employed bad foremen.

Q. What do you pay those foremen?—A. I pay them from \$70 to \$100 for each trip.

Q. And how much do you pay the underhands?—A. \$25 or \$30 or \$10, and some of them down to £1 sterling. These are fellows who want to get their passage over.

Q. These are the men, I suppose, that complaints are made about?—A. We give them these \$5 to make them take an interest in the cattle. We tell them that if they work well when they get to the other side they will get paid.

Q. Does any doctor ever apply to you for a passage on board one of these cattle boats?—A. No, sir, I do not remember ever having had a doctor apply to me.

Q. Did any clergyman ever apply to you?—A. No, sir, but there are a good many farmer's sons who come down from Ontario and want to get across in charge of cattle.

Q. Do any lawyers ever apply to you for a passage in charge of cattle?—A. No, sir, lawyers could not live very well on the sort of grub they get on these steamers.

Q. Did you ever have an application from a member of Parliament for this position, because it has been stated that they have been over in charge of cattle?—A. No, sir. I saw that statement in a newspaper, but I think it was made by the steamship agent to throw the blame of anything that might happen on the steamer on the shoulders of cattle shippers for supplying incompetent men to go in charge of the animals. We supply very good men to take charge of the cattle going across, and I think it was by way of ridicule that the shipping agent made this statement.

Q. You want men that you can rely on to be in charge of the cattle and that is the reason that you insist on being allowed to supply your own men?—A. Yes, if a rule were made that the steamships should supply men, I would let them supply the cattle also.

By Mr. Greenshields:

Q. What about the insurance? Do you think the ship should do your insurance for you?—A. I think every shipper of cattle should place his own insurance wherever he likes.

Q. You would not leave that to the steamship men?—A. No, he should have power to judge for himself whether the certificate is good or not. In case a ship should meet with a total loss under such circumstances the steamship owners have it all in their own hands. There was a vessel lost at Anticosti, and the steamship owners wanted to claim the freight before they paid the insurance on the cattle.

Q. You do not like this arrangement of the regular line of steamships doing your insurance for you?—A. No, sir, I would prefer to do it myself.

Q. Would they not quote your rate for freight without the insurance?—A. You have to take the whole thing from them or go and pay your insurance elsewhere.

Q. That would practically be making you pay double for insurance?—A. Yes.

By Mr. Smith:

Q. Have you any suggestions to make in this matter which you think would cause the trade to be rendered more secure?—A. I think the dead cargo should be loaded on all steamers before the cattle are put on board. I think there should be a law that no cattle should be put on board during the loading of other cargo. There would not be all the confusion on the wharf which Mr. Coughlin spoke about if the cargo was loaded before the cattle.

Q. Could not you arrange that matter with the owners of the steamships?—A. No; they want to be loading all parts of the cargo on board the steamer at the same time. They want to be loading the dead cargo and putting up the fittings at the same time, and this is a hardship to the animals. Until we get better accommodation on the wharves, I think the hardship to the cattle would be minimised if they started loading at daylight in the morning, when the ship would be ready for sea after taking them on board. I got a good deal of my cattle to the wharf in cars. It was not during the day I took down my cattle; I got them down at night.

MR. COUGHLIN.—I refer to the want of accommodation in taking cattle down. I said they should be taken to the wharves in the cars during the day, but we could not manage that because they claim there is not room enough on the wharves.

Mr. CROWE.—It would be a good thing if we could send them down in the cars at night and let them stay in the cars until we started loading them at daylight in the morning. If the Harbour Commissioners could make arrangements that the cattle could be brought down to the wharf in cars it would greatly facilitate the trade.

Mr. SMITH here asked some questions of Mr. Henry Bulmer, President of the Harbour Commissioners of Montreal.

Q. It has been stated, Mr. Bulmer, that the difficulty with the cattle loading here is owing to the Harbour Commissioners and the railway companies not providing sufficient accommodation. Have you any explanation to make about that?

Mr. BULMER.—I may say that there is a city regulation as well as a harbour regulation that no train shall be run with locomotives on the wharves during the day time. Our wharf is very narrow, and, even suppose that restriction were not put on and the cattle were allowed to be taken down in the cars there is not sufficient accommodation with the present lines of railroad on the wharf. It has been said here that arrangements could be made to bring cattle trains down, but we have only two lines of rail on the wharf and there is no room for a third one. The Grand Trunk and the Canadian Pacific Railway have each a line on the wharf although the tracks belong to the Harbour Commissioners. Whenever they have to move the cars, they have to clear the whole length of line of track, and if they attempted to run a cattle train down in the day time they would have to clear all the cars on the track. The trains are all run down during the night time, and until a third line of rail is laid down which would be used for the cattle business, it would be impossible to bring all the cattle down in the cars.

By Mr. Greenshields :

Q. And these cars with other kind of freight are left standing on the lines to be loaded?—A. Yes, that is done during the night. You cannot run two trains on the one track, and until we get a third track the cattle cannot be carried down in the cars.

By Mr. Smith :

Q. Is there any plan in contemplation by which this could be remedied?—A. Yes, it can be remedied by the new harbor plans which have been prepared and which are waiting for adoption now. When these improvements in the harbour are carried out there will be room for another line on the wharves.

Q. Would that remedy the difficulty?—A. Well, the question would rise then as to running trains during the day to interfere with the general business. I have not the least doubt that matters could be so arranged so that cattle trains could be run on the wharf at special times.

By Mr. Greenshields :

Q. There is no provision in this proposed harbor improvement for special arrangements for the shipment of cattle. There is no more provision for improvement in cattle shipping than there is for any other cargo?—A. There would be more wharf accommodation.

Q. I understand that you will have another line of railway, but there is no special provision for the handling of cattle more than there is to-day except the increased harbor accommodation?—A. The question has been frequently raised within the last two or three years as to the erection of a special wharf where all the cattle should be taken on board the ships. The last time the question was up, it was represented very strongly to the Harbour Commissioners, and it was decided that if the ship owners and the cattle shippers could agree upon any particular place to be set apart for that business the Harbour Commissioners would endeavor to meet them. It would be useless to have the Harbour Commissioners set apart wharves specially for this cattle business, if the ships would not go there. That is the position in which the matter stands now.

Q. Until the cattle shippers and the steamship owners come to some agreement about the place, the Harbour Commissioners can do nothing?—A. The Harbour Commissioners cannot absolutely say to the ship owners. "You must take your ship there as we cannot load it with cattle any where else."

By Mr. Smith :

Q. Is there any difficulty in shipping cattle from trains during the night now?—A. The cattle trains are brought down during the night now.

Q. Then what is the difficulty about loading them from the cars?—A. You have to bring the cattle down in the afternoon if the shippers want them.

Examination of Mr. Crowe continued.

Q. Do they load the cattle now at night?—A. They load them in the early morning, but the shippers send up to the yards for cattle whenever they want them whether it is in the day time or at night.

Q. Is there any place where you ever saw cattle shipped so badly as at this port?—A. There is, sir. I have seen them in Ireland shipped worse than this.

Q. That is too far away. Let us confine ourselves nearer home.—A. Well, I think it is a queer thing to find Mr. Plimsoll interfering in our trade out here while if he paid a little more attention to cattle shipments right across the channel, from England, he would see far more room for improvement there. As far as shipments on this side are concerned, I may say that they have a good system of shipping cattle in Boston, New York and Portland, where the cattle are run alongside the steamer in the cars.

Q. Have they a good system in Quebec where they can take them and load them direct from the cars?—A. I do not know; I had some cattle loaded there, but I did not go down.

Q. Do you think it would be an improvement to ship cattle from Quebec instead of from Montreal in warm weather?—A. I do not think it would. This place is good enough for me to ship my cattle from.

Q. But you have mentioned a great many difficulties here, which seem to be almost overwhelming.—A. I think a man himself can get over a good deal of the difficulties if he minds his business. If you do not comply with the wish of the steamship people to run your cattle to the ship during the middle of the day, you can get over some of the difficulties.

Q. And if you do not do that, I suppose the steamship will have to wait?—A. I think so, and when I believe it is necessary I try to make them do it.

Q. And you bring your cattle down at night?—A. Yes.

Q. And you have no trouble?—A. There is no trouble when you load your cattle at daybreak in the morning. The whole thing is that you should make a regulation compelling the steamship men to finish the loading of their dead cargo before they put on cattle.

Q. That might be all right in the case of a large shipment of cattle, but if a man were shipping only 10 or 20 head, the steamer might not wait for him?—A. Yes; but I think if they were made to finish their cargo before putting their cattle on, it would be a great improvement. It should be provided also that the animals should be loaded at night or in the early morning.

Q. You are a very large shipper and you ought to know something about the trade. How are these cattle treated on the ship going over to England—are they treated badly?—A. No, sir.

Q. You have read Mr. Plimsoll's book?—A. Yes.

Q. You have read the statement with regard to cattle being cruelly treated and having their legs broken?—A. It is not so. I know for a fact that if you give your cattle hay and meal they will improve in the passage over.

Q. That is during the summer months?—A. Yes; or in the fall months, if they have got a fair passage. If you feed them very well they will look a good deal better when you get them on the other side than they did when they were shipped here.

Q. That is your experience?—A. Yes; that is my experience.

Q. And you have been a cattle shipper for how long?—A. I have been a cattle shipper all my life, but I am only four years here.

Q. Did you do business in Ireland as a cattle shipper?—A. Yes, sir, and in Scotland and Glasgow.

Q. And you have seen the animals unloaded after they had crossed the Atlantic?—A. Yes sir, I saw them killed too without marks or bruises or anything else on them. In fact I may tell you it is a difficult thing to get a badly treated animal in Canada.

Q. So that in your opinion the trade is well conducted?—A. Yes, it is well conducted. There might be some improvements though.

Q. There are less marks on Canadian cattle than on other cattle?—A. Yes. A butcher in the old country buys an Irish beast that is sent to Liverpool, London or Glasgow, and very often there are stick marks or something else on the flesh.

Q. How are the cattle shipped from Ireland to England?—A. Something like that picture which is published in Mr. Plimsoll's book.

MR. GREENSHIELDS.—That is probably where the idea of the picture comes from.

MR. CROWE.—That is where it comes from sure, if some body has not invented it.

MR. SMITH.—You think if we had Government regulations incorporating all these improvements which we are speaking about there would be no ground of complaint about the cattle trade from Canada to England?—A. I do not think there would.

Q. You think all the grievances would disappear?—A. Yes, I think so.

Q. And you think the cattle would be comfortably provided for on the voyage?—A. Yes, and I think further that all vessels should be made to comply with the regulations whether they are regular carriers from this port or occasional cattle carriers.

Q. Do you think permanent fittings on the upper deck would make the animals more comfortable?—A. Yes.

Q. I suppose then the vessels could carry the same fittings backward and forward?—A. Yes. With those modern improvements and with iron frames for the deck houses the animals could be carried well and comfortably.

Q. Do you think that any casualties have occurred because tramp steamers were not well fitted up?—A. No, sir; I think all the casualties have occurred from stress of weather.

Q. Yes, but the ships are supposed to be built for stress of weather, but they may have been built for one trade and put into another trade for which they are not suitable and that might produce casualties?—A. Yes, sir, but there are exceptional cases in which a ship might strike a fearful sea and nothing could stand it. Take the case of the steamer "Iowa." I claim that the "Iowa" is one of the best cattle ships in the world, and yet she lost 500 out of 600 head of cattle on one voyage.

Q. Had she any cattle on the upper deck?—A. Yes sir.

Q. What kind were the fittings?—A. They were fixed with iron bracing under the bulwarks and the fittings were of good timber.

Q. But they were not permanent?—A. I believe they are permanent now, but they were not permanent at the time of the loss. She lost a number of cattle between decks.

Q. If the cattle had good ventilation in bad weather and the animals were properly tied by the heads would they be killed?—A. I think the ship could roll sufficiently to kill some cattle in bad weather.

Q. Would not the deck load tend to make her top heavy?—A. It would not if she were properly loaded.

Q. Whether are cattle safer on the upper deck or below in winter?—A. They are safer on the upper deck if the fittings are good.

Q. Then this question is largely a question of permanent and strong fittings?—A. Yes, sir.

Q. Do not the animals suffer from the cold on the upper deck during the winter?
—A. No, they would not get any more cold, nor as much as they do in the open fields.

Q. Do you think that if cattle vessels carried oil and spread it on the sea in stormy weather it would help them?—A. I think it would help them greatly. I have heard the captains of the Hansa line speak very highly of the good effect of oil. They use it on their steamer. I have heard them say that on three or four occasions when they met bad weather they spread the oil on the sea and it had a very good effect.

Q. Are you opposed to prohibiting cattle from being carried on the upper decks of steamers in winter?—A. I am, sir.

Q. You say that cattle might be carried on the upper deck in winter?—A. Yes, certainly, if they have good fittings. I think that fittings should be made as strong as to render the cattle as secure as if they were between decks.

Q. Would you suggest that the fittings should be covered in?—A. Yes; I would cover them all over.

This concluded the evidence of the witness.

JOHN OGILVY, merchant of the City of Montreal, gave the following evidence:—

By Mr. Greenshields :

Q. Mr. Ogilvy you have had occasion to cross the Atlantic a number of times to England?—A. Yes.

Q. For how many years past?—A. For forty-five years.

Q. Did you ever go over in ships that carried cattle?—A. Yes.

Q. Have you had occasion to notice how these cattle were treated during the voyage?—A. I have taken a great deal of interest in the shipment of cattle, and have always watched how the animals were treated and so on.

Q. You have no pecuniary interest in the cattle business?—A. None whatever.

Q. What has been the result of your observations as to the treatment of cattle on board the ship?—A.—They were always treated very well on any ship I was on.

Q. You have made more than one trip on a cattle ship?—A. Yes, I have made a good many, I suppose fifteen.

Q. You have therefore been on ships carrying large numbers of cattle?—A. Yes.

Q. You travel on the Beaver line of boats?—A. Yes.

Q. Did you notice the condition of the cattle after they were landed?—A. Yes.

Q. And you saw them from day to day on the steamer?—A. Yes.

Q. What was the condition of the cattle when they were landed?—A. Well I think as a rule they were better than when they left Montreal.

Q. Did you see any of the men treat them cruelly, beating them or burning hay in their ears, or anything of that kind?—A. Never.

Q. You saw no object for making them stand up during the voyage, did you?—A. None whatever.

Q. Did the cattle lie down?—A. Yes; they laid down comfortably.

Q. And during your observations you did not see the men in charge of the cattle trying to make them stand up, or prevent them from lying down?—A. Never.

Q. The cattle were in charge of four men, and these men had subordinates under them?—A. Yes; they were in charge of one or two foremen.

Q. And the cattle were well fed and well taken care of?—A. Yes; very well fed.

Q. You have no experience in shipping cattle, and have no suggestions to make as to the manner in which they should be shipped?—A. I have always taken a very great interest in the matter, as the exportation of cattle is a very important industry for Canada. I should be very sorry to see that anything was done to stop this important trade.

Q. The stopping of the shipment of cattle to England would be disastrous to this country, would it not?—A. Most decidedly.

By Mr. Smith :

Q. You saw nothing of the condition of the cattle on the voyage which might be improved. They were just as comfortable as in their own barn, as far as you saw?—A. Quite so.

Q. Did you ever see any cattle on the upper deck?—A. Yes.

Q. How were they treated?—A. Very well.

Q. I suppose it was in warm weather you crossed?—A. I have not crossed in dead winter, but I have crossed at all other times of the year. I have crossed in the fall, in the month of November.

Q. How did the cattle do on the upper deck in the cold weather?—Very well.

Q. Were they comfortable or not?—A. Yes; they were very comfortable.

Q. And you thought it was not too cold for them on the upper deck?—A. No.

Q. Have you any suggestions to make as to changes that might be made in the law with regard to the cattle-carrying trade?—A. I have not. I merely speak of what I saw as to the treatment of the cattle going across the Atlantic.

This concluded the evidence of the witness.

C. M. ACER, President of the Grand Trunk Stockyard Company, and exporter of cattle from Canada to Great Britain, gave the following evidence :—

By Mr. Smith :

Q. You have heard a good many suggestions made during the course of this enquiry. Would you recommend any of the views expressed?—A. I think some of them are very good and some of them are very bad.

Q. Tell us which recommendations you approve of?—A. We are all very selfish, and there seems to be a good deal of self-interest in this matter. I suppose I have as much of it in me as any of the others. Anyone of those questions which you might ask me, I will try to answer as well as I know how.

Q. Before any questions are asked you, is there anything you wish to say about the trade generally?—A. I have only been here a little while this morning, and have not heard all the evidence.

Q. Do you think it would be wise to prohibit the carrying of live stock on the upper deck during the fall and winter months?—A. I do not.

Q. You think it would be better to allow the cattle to be carried on the upper deck?—A. Yes, under certain restrictions. I think for about four months in the year most any ship that comes to this port can carry cattle safely, that is to say, during the months of May, June, July and August or perhaps the first week in September, but when the equinoctial gales strike the Atlantic, when the vessels have to batten their hatches down, under the present condition of things, the lives of the cattle are not particularly safe. I think the first four trips a vessel makes from the port up to the first of September, there need be very little attention paid to the fittings of any of these vessels or the ventilation or anything else, but after that date it becomes a very serious matter, and I think they ought all to be strengthened as far as their fittings are concerned.

Q. If it be a good thing that regulations be made after the first week in September, why should not they be made all the year around? If it is good to give the cattle ventilation in September, why would it not be good to give them proper ventilation in August?—A. They have plenty ventilation during the summer months. It is only when they have to close the hatches that the difficulty about ventilation arises.

Q. You will remember that on the 24th of August, seven or eight years ago, we had one of the greatest storms ever seen on the Gulf or on the Atlantic.—A. I have no experience of that. I have not lost any cattle in August.

Q. You would not be particular as to the shipment of cattle in the early part of the year?—A. No, but I am very particular after the first week in September. So

particular am I that of late years I have not been shipping cattle in the fall after that month. I think that, considering the loss and damage to the cattle and the low prices in England, it is a bad deal.

Q. Then you think that the exportation of stockers is not a paying business?—A. I do not think it is. People will tell you I am prejudiced against stockers, and that I do not want them to get out of the country. I think if the boys drop their money as they have dropped it this year, and if the cattle are sent over the same as they were, John Bull will get so tired of them that he will not feed them. Some cattle that were sent away from Canada this year were things that the farmers in this country would not feed. That trade will regulate itself soon. I think it does not pay to send over bad cattle.

Q. You shipped your cattle in the early part of the season?—A. Yes, sir; I was fortunate, or, as some might think it, unfortunate enough to sell my cattle in the earlier part of the last season.

Q. You did not ship any yourself?—A. I shipped a few, but the majority were on account of other parties. They thought they were going to be short of cattle on the other side, and some English people came out to see me in the early part of the year and bought my stock, but they seem to have made a mistake in their calculations.

Q. Do you believe in the Government inspection of cattle, or do you think that things should be allowed to remain as they are?—A. I believe that the Government inspection is a good thing.

Q. Would you suggest that fixed regulations be made, or would you allow the inspector to go according to his own judgment?—A. I think that our inspection has been very good heretofore, and that it has been conducted by good men, and that there is no contagious disease among animals in this country.

Q. I refer to the inspection as to the loading of cattle, the quality of the fittings, the space allowed, and so on?—A. I think that from the precautions taken by the steamship companies and by the insurance companies here, the whole thing will regulate itself soon. There are three lines of steamers that do their own insurance, and they consider that they are directly interested in carrying over the cattle in good condition.

Q. You do not think any regulations are necessary?—A. I do not.

Q. And you think that the business as it is conducted now is all right?—A. Yes.

Q. The proposition is made to have powers defined by Act of Parliament under which the Government can make fixed rules and regulations to govern an inspector who may be appointed for this purpose.—A. I think there should be some tacit understanding that we should have a space of 2 ft. 6 inches, or 2 ft. 8 inches for each animal.

Q. It is proposed to have fixed rules and regulations printed so that everyone can read them, so that there can be nothing tacit about the matter.—A. Then that will be a new departure for the cattle exporters. They do everything by word of mouth now, and make their arrangements tacit or otherwise.

MR. CROWE.—You had better speak for yourself.

MR. SMITH.—You think that the cattle trade is so well regulated just now that it should be left alone?—A. Yes, sir, I think so. I understand that the United States only allow 2 ft. 6 inches for each animal, and I think the same state of affairs should be there as here, except in some cases in the springtime when there are some particularly heavy cattle here. These heavy distillery cattle should be allowed 2 ft. 8 inch. For instance, some of these heavy distillery cattle weigh over fifteen hundred pounds.

Q. But if a fixed rule were to be made, whether would you recommend a space of 2 ft. 6 inches, or a space of 2 ft. 8 inches?—A. I think I would agree with Mr. Crowe that 2 ft. 6 inches is enough.

Q. And you would put five stockers in the place of four fat cattle?—A. Yes, but the trade is not altogether run by the stockers.

Q. Well, it is proposed to give the animals 2 ft. 8 inches, if they are not stockers ?
A.—That is too much.

Q. It would not hurt them, would it ?—A. It would not hurt them, but what is the use of throwing your space away ? You might as well put only six cattle on an entire large ship. It is just as unnecessary to throw your space away by inches. In July our cattle run lighter than in the spring, and I think a space of 2 ft. 6 inches is sufficient for ordinary cattle.

Q. Have you had anything to do with the shipping of cattle, and seeing them put on board ?—A. Yes.

Q. Do you think that there should be a height of 7 ft. 3 inches between decks ?—
A. I do not know much about that, but I think it is a fair height.

Q. Do you think vessels should be provided with steam fans for ventilation ?—
A. I think it is a very good improvement, and I think it is very necessary in the fall of the year when they have to close their hatches down at sea, but otherwise I do not think it is very necessary.

Q. Would you prefer a vessel with steam fans to a vessel without them ?—A. Most decidedly I would.

Q. Have you any recommendation to make regarding the carrying of water condensers by cattle ships ?—A. I think it is very necessary that these ships that carry cattle late in the fall should be fitted up with these “booby” hatches, and have plenty of ventilation and have sufficient apparatus for supplying fresh water.

Q. Do you think vessels would be safer for carrying cattle on the deck if they were fitted up with angle iron frames and heavy two-inch plank ?—A. I think the vessels ought to be well fitted in the Fall, but I do not think it makes much difference how they are fitted up in the summer time.

Q. Have you ever been across in any of these vessels ?—A. Yes, sir, I have been across almost every month of the season.

Q. What is your experience in reference to how the cattle are taken care of on board the steamers during the voyages ?—A. In some cases, I think they get very good care, and in some cases I think they do not.

Q. Where have you seen them not well cared for ?—A. I cannot mention any occasion that I know of personally. When I went over with cattle, they were my own and they got good care.

Q. You never went over on a cattle ship with other people's cattle ?—A. No.

Q. You were looking after your own cattle when you went over ?—A. Yes, sir.

Q. Had they plenty of room to lie down during the voyage ?—A. Yes, sir.

Q. Had they a space of 2 feet 6 inches for each animal ?—A. My cattle usually had a space of 2 feet 8 inches, but I think they would have had plenty of room with 2 feet 6 inches.

Q. Had they room to lie down ?—A. Plenty of room.

Q. Had they room to lie down and get up again ?—A. They had plenty of room to lie down and get up again.

Q. Is feed for the cattle carried on the upper deck ?—A. Yes, it is carried on the upper deck and between decks and wherever they can stow it.

Q. Do you think that hay should be stored on the upper deck ?—A. Well, they require a certain amount of hay to take them out of the river, and I think that that might be on the upper deck. They have tarpaulins to put over the hay right on top, and we generally carry it on the cattle coverings. You can carry two or three days feed on the upper deck until you get to the Gulf. Until you get down there it does not matter where you carry it.

Q. Do you select your own cattle men ?—A. Yes, sir.

Q. And you think that it is the best way that the selection of the cattle men should be left to the cattle owners ?—A. I think so ; I think every cattle exporter should hire his own men.

Q. Do you think these cattle attendants should be under the control of the captain and should sign the ship's articles ?—A. I do not think it would be objectionable.

Q. Did you ever happen to have any cattle men in charge of cattle that could not do the work, and who wanted to lie down in bed?—A. I do not know if I ever had any, but I think it is the case with plenty of them.

Q. You have to take your chances upon getting good men?—A. Yes, there are a good many men going across with cattle that I do not consider very good men. Our foremen, as a rule, are very good men, and we sometimes have a few good underhands to take care of the cattle, but about half the men who go across with cattle do not count for much. As a rule, that is our own fault, and it depends on the way in which the business is conducted. I think that if about half of these cattle men were left at home, and if we paid better men in their places, it would be an advantage to trade.

Q. Do you think it would be an advantage if cattle carrying ships were lighted with the electric light.—A. No; I do not. It is going to be an additional expense to put in the electric light, and I do not think it necessary to provide that cattle ships should have it.

Q. You think it would be of no advantage?—A. Oh, I do not say that.

Q. In case of heavy weather do you not think it would be an advantage to have the electric light so that the men could go conveniently amongst the cattle, and with less danger?—A. I do not think the electric light would amount to anything in heavy weather if the ships are well ventilated and hatches down. If we are to have all these improvements and make the ships put in electric light, it is going to cause expense, and I do not think the cattle trade will stand it. We have got along very nicely as it is.

Q. You stated just now that there was no money in the business?—A. That is all the more reason why we do not want to put extra expense on. I do not think the electric light is necessary. I do not think the cattle will be in jeopardy if you give them plenty of ventilation. Men are always supplied with lanterns in the night time, and I do not see the necessity of forcing the electric light on the vessels at all. If the ship sees well to put in the electric light, so much the better, but I would not say it was absolutely necessary.

Q. Are the cattle generally allowed twelve hours rest after they arrive in Montreal before they are put on board the steamer?—A. No, sir; they are not.

Q. Are they generally shipped immediately?—A. They often do ship them immediately, and I do not think it very well, either.

Mr. CROWE.—Not when you charge \$26 a ton for hay.

Mr. SMITH.—The cattle are put on board the ship as soon as they arrive in Montreal?—A. Yes.

Q. And they are driven down to the wharves?—A. Yes; they are driven down to the wharves. I am in the stockyard business, and if they do not stop and feed the cattle, I do not like it.

Q. You would like them to stay at the stockyard?—A. Yes; certainly.

Q. And I suppose you think they would be the better off for a rest at the stockyard?—A. They would be a good deal the better off with a rest at the stockyard, and I think you should compel them to give the animals a rest there. I think you should recommend the Government to do this.

Q. How long do the animals generally remain in the stockyards?—A. Usually they do not want to stay too long. They want to get the cattle out as quickly as they can. They stay all the way from an hour to 48 hours. That is according to whether the ship is ready to take them or not.

Q. And do they appear to be much better when they have rested a couple of days?—A. Well, they are none the worse for it, and I think they are the better for it. I believe if they are rested only for 12 hours, it is a benefit to them. They should not be rested for less than 12 hours after coming down on the railway cars from Toronto.

Q. And you think that there should be a regulation made by the Government?—A. I think there should be. Of course, some others will tell you that I am interested, but whether I am or not, I think it should be a regulation.

Q. Did you ship many cattle yourself this year?—A. About 5,000.

Q. Was it a profitable business?—A. It was to me, because I sold my cattle to the English buyers before I shipped them.

By Mr. Greenshields :

Q. Is it not very dark down between decks?—A. Yes, as a rule, it is dark in stormy weather.

Q. That is the time we want the electric light?—A. They don't bother about electric light or anything else in stormy weather.

Q. Have not the men to go down amongst the cattle in stormy weather?—A. They are not down there a great deal of the time.

Q. If they have to go down between decks, it would be much better for a man if he had the electric light than if he carried a lantern, and had only one hand disengaged to do his work?—A. That is quite so.

Q. In that case the electric light would be a great advantage, and besides it would possibly lessen the danger from fire?—A. For my part I have got along for 15 years without those electric lights.

Q. And they could get along very well many years ago with tallow candles?—A. Well, I suppose they did not grumble when they had the tallow candles. If you put electric lights in these ships, you will find that they will put five shillings a head on your cattle for travelling in that first-class manner.

Q. The question is, would not the electric lights be an advantage on the cattle ship?—A. No doubt they would be an advantage, but if we advocate such a thing the freight will be higher. For instance, it was only last year that they got electricity into the passenger steamer "Parisian." If the cabin passengers get along without electric lights as they did until last year, surely the cattle can get along without it for a year or two longer.

By Mr. James Allan :

Q. When you crossed in charge of cattle were you and your men well treated?—A. I have never heard any serious complaints except in reference to the French line of steamers.

Q. Did you and your men have enough to eat?—A. Certainly.

Mr. GREENSHIELDS.—I suppose you were well fixed in the cabin?

Mr. ACER.—I have heard no complaints this year from any of my men, and I have loaded the whole of the stock in Reford's and Thompson's boats up to July.

Mr. GREENSHIELDS.—Some person made a statement this morning that they found a good deal of fault with Mr. Reford's steamers?—A. I may say that none of my men made any complaints.

Q. And your own experience in crossing with your own men was that they were well treated?—A. Yes; they were well treated. In fact, they got just as good a supply as if it were regulated by Act of Parliament. The sailors' food was regulated by Act of Parliament, and the cattlemen were supplied as if they were regulated by Act of Parliament also.

Q. How many times did you go over with your own men?—A. Three times.

Q. Did you go over in the Allan boats?—A. No; I went over in the Beaver line, and I went over once on a tramp.

Q. I gather from your evidence as a whole that you are pretty well satisfied at the way business is conducted at this port?—A. We could, perhaps, make some slight improvements, but otherwise things are pretty well managed.

Q. So that you think this Commission was unnecessary?—A. I think we lived a long time without it, and I think we could live a little while longer without it. I would make one suggestion in regard to the Bill of lading. I think that the steamships have a clause in their bill of lading whereby they make us pay freight in the event of loss of the steamer. I think that that should not be the case. I think if the steamer loses our cattle she should lose our freight also. In as much as the steamer does not make delivery of the animals, I think they are not entitled to pay, and I do not think we should be called upon to pay them.

Mr. JAMES ALLAN.—Would you not pay freight even for the proportion of time that the animals lived during the voyage? Would you have the steamers carry them thus far for nothing?—A. I think so.

Q. Would you have the steamship people employ their property without any remuneration?—A. I think they are very well paid. You can insure your freight if you want to do so, and then you are in the same position as we are. If you undertake to do something and do not do it, I do not see why you should get money for it. I may say, however, that if all the lines running to this port were like the Allans, this question would not arise very often, for I have yet to know of their having lost a vessel since I have been in the business.

Mr. ALLAN.—I am not fishing for compliments.

Mr. ACER.—Well, you can have that one if you like.

Mr. ALLAN.—What I wanted to know was, do you not think it reasonable that if a contract was carried out to a certain extent a certain proportion of the remuneration should be paid? Suppose an animal is lost through no fault of the steamship, do you not think it is only fair to pay?—A. That would be a pretty hard thing to prove.

Mr. ALLAN.—It seems to me you are taking a one-sided view of the question?—A. It seems to me that if you undertake to carry our cattle and by any reason whatever you lose your vessel and our cattle, I do not see that we should be called upon to pay the freight.

Mr. ALLAN.—Are you speaking of total losses or do you mean when only one animal dies?—A. I am speaking of total losses of the vessel. For instance, the Dominion line have undertaken to collect the freight on two occasions, and I think it would be well for them to throw up the case because, I do not think they can get it in law.

This concluded the evidence of the witness.

JOSEPH XAVIER PERRAULT, of the City of Montreal, gave the following evidence:

By Mr. Greenshields :

Q. You are a member of the Chambre du Commerce, Montreal?—A. I am honorary President of the Chambre du Commerce. I am also a pupil of the Royal Agricultural College of Cirencester, England, and of the National Agricultural School of Grignon, France.

Q. You have always taken a great interest in matters connected with the prosperity of Canada, and particularly in reference to the trade of Montreal?—A. Yes; I have taken a deep interest in reference to the exportation of cattle to England?

Q. Did you ever cross on a cattle ship to England?—A. Yes.

Q. Why did you go across in a cattle ship?—A. I went across principally to acquaint myself with the manner in which cattle behaved on board ship, because I was asked in France, in reference to the exportation of Canadian cattle, which they were much afraid of, as they feared it would come into competition with their own cattle. I was anxious to know if there was any considerable mortality amongst the animals on board ship, so as to ascertain how far that trade would be beneficial to the different interests of the country, and as to how it could be properly carried out on a large scale, I crossed on board the SS. "Montreal" of the Dominion Line, four or five years ago in early spring. There were 550 fat cattle on board, loaded on three decks—the hurricane deck, the main deck and the steerage deck. I took particular pains to ascertain how everything was carried on and I went around the ship twice a day to see the way in which the cattle were housed and taken care of, so as to make myself satisfied with reference to this branch of the business.

Q. The men in charge of these cattle did not know, I suppose, that you were there to make a special examination of how they were attending to the cattle, so that they did not attend to the animals any better on that account?—A. Not at all.

Q. Was there any cruelty to the cattle on board the vessel?—A. No; the men attending to the cattle were a decent lot of fellows. Most of them were Irishmen, and they took good care of the cattle. They behaved very well on board the voyage. There was no row amongst them, they were a nice lot of men for that business, and it appeared to me that they ought to be treated well by the authorities on board ship.

Q. Were these cattle as comfortable on board ship as if they were in their own stables?—A. They certainly were. I went round twice a day during the whole trip, and my experience was that these cattle were as comfortable as in their own byre. Of course, they were a little close together, and I do not think they could all lie down together. There was one animal standing for about 4 or 5 that were lying down, but after a while the cattle which had been lying down would get up, and the other animals would lie down. They followed out that rule during the voyage with the very best grace.

Q. Do you think it would be better if they had sufficient room for them all to lie down?—A. Oh yes; I think 2 feet 8 inches is the minimum space we should have, in my opinion to give the cattle comfortable quarters all the way across the ocean.

Q. These cattle were not obliged or forced to stand up during the whole voyage?—A. They were lying down most of the voyage and were very comfortable. They had good hay, good shelter, and were well watered.

Q. Had they a space of 2 feet 6 inches or 2 feet 8 inches?—A. I cannot say, as I did not measure it; but I should think they ought to be allowed 2 feet 8 inches at least. They were heavy high-fed cattle and very large. Probably, for cattle of a smaller size, less room might be allowed, and they would still be very comfortable, as Mr. Acer, says, the space might vary in relation to the size of the cattle.

Q. It was no cruelty whatever to these cattle to take them across the Atlantic. They appeared to be very comfortable; and there is no objection, in your judgement, to the shipment of cattle across the Atlantic on humanitarian ground if they are properly taken care of?—A. Certainly not. My experience is that Canadian cattle are better treated on a voyage, than anywhere else in Europe. I have been across the Black Sea on a cattle boat, from Odessa to Constantinople, where the sea is very rough, I crossed in mid-winter. There was no covering for the cattle or no division made between them. They were tied to the rail, right on top of the ship, and still they stood the journey very well. They did not appear to be affected by the movement of the ship and they seemed to manage just like sailors. The cattle were not any way near so comfortably fixed as Canadian cattle are. It is a false notion to say that cattle will suffer on board ship, if they are properly attended to. I cannot explain this war which is being waged against the Canadian cattle trade, other than that it is an indirect way of protecting British cattle against the competition of Canadian cattle.

Q. You have read the legislation, which it is proposed to carry out in England?—A. Yes, I have read it, and it is just the same thing that is done in some continental countries. In France, several years ago, there was an immense importation of American hogs, and millions of money were spent for American pork. The French farmer did not like this at all, because he could not compete with the American hog. And then the cry was raised that the American hog suffered from trichinosis. They gave out that it was a dangerous thing to eat the American hog, and they prohibited its importation, so that you cannot bring an American hog into France now. Of course, that was only an underhand way of prohibiting the importation of American hogs into France so as to protect the French agriculturists. We eat American pork here very largely and we are not afflicted with trichinosis or any other disease. Therefore, this was simply a dodge to keep out the American hog, and they have succeeded in keeping it out and the farmers are producing pork themselves now. Pork is just as cheap in France now as it was when the American hog was imported. I do not see any reason for this war against the importation of Canadian cattle into England. It is simply an indirect way of protecting the British farmer against the cattle raisers of Canada and the United States. They will not put a direct duty on beef going into England on principle, because it is a free trade country, but they a. e

trying to prohibit the importation of cattle, so as to prevent this rivalry of American beef with the English beef.

Q. This proposition of the Bill now before the Committee in England, is an absolute embargo?—A. And that is still better to protect the English farmers. They wish to prohibit American and Canadian cattle in England, just as in France they prohibited the American hog.

Q. Do you consider that the prohibition of this trade will be a serious matter for this country?—A. It will be a terrible matter for this country. In the United States they have just put extra duty on Canadian cattle, and they have introduced a quarantine of Canadian cattle. We are not allowed to ship our cattle to the United States now, and if England does the same thing where will be the profit of raising cattle in this country? It is a vast industry in Canada now, and especially in the North-West, where we are about to reap the result of ten years of labour and great expenditure, and it is probably on account of this coming danger and the great competition which the North-West cattle will give, that this measure is proposed to be enacted in England.

Mr. SMITH.—The aim of that Bill was, that instead of sending live cattle, dressed beef would be sent over in cold chambers?—A. The expense of sending dead beef across the Atlantic and the low price it commands in England would render it an unprofitable trade for Canada. When we have to import corn in Canada to feed our cattle we cannot compete with the Americans if we kill our beef and send it across as dressed meat.

Q. But only seven or eight thousand cattle have been exported from the North-West?—A. Yes; but I expect that trade to develop to immense proportions.

Q. This Bill prevents the exportation of "stockers" from Canada. Can we buy grain in the States to fatten our cattle and send over the dressed beef to England to compete with the Americans?—A. I do not think so. The Chamber of Commerce has taken up the question of having union stock yards in Montreal, for we think that the mode of shipping cattle is not satisfactory just now; and if union stock yards were established, somewhere on the River St. Lawrence, down below Hochelaga, when cattle arrived here they could be rested for 24 hours or more. They could be properly inspected by the Government Inspector, and then taken from the yards by lighters and put on board the steamers in port, without going through the streets or mixing up with the freight on the wharf. We have passed resolutions asking that these stock yards should be built, as is the case at other ports where a large cattle business is being carried on, and we hope that in the near future we will obtain them.

Q. If they cattle were shipped in lighters, that would avoid all the difficulty of their having to be driven down to the wharf, as the railway cars cannot go on the wharf now?—A. Yes, sir, it would avoid the difficulty. When animals are left standing on the wharf, subject to great discomfort during a hot day, it has a very bad effect on them. If we had stock yards along the St. Lawrence there would be no inconvenience whatever. A lighter could be brought alongside the steamer on a level with the deck, and they would be put on board comfortably and without any trouble to the men or to the cattle. No time would be lost and the whole thing would be done economically, as it would not cost more than 10 cents a head. We would use these pontoon bridges on the lighters to bring the cattle on the deck of the steamer. In the spring of the year, when the water is high, you have to raise the cattle some 15 or 16 feet to the steamer, which is a very dangerous process. Sometimes the cattle get into the water, and there are as many as 20 or 25 head in the river at the same time.

Mr. ACER.—How often does that happen?

Mr. PERRAULT.—I cannot say how often, but I know it has happened.

Mr. CROWE.—I had 10 head of cattle in the water last season.

Mr. CUNNINGHAM.—I saw 24 animals in the water at one time, myself.

By Mr. Smith :

Q. Have you anything to say as to improvements which might be carried out, so as to have a proper officer appointed to see that the fittings on board cattle ships

are properly erected?—A. That inspection is partly done to-day, but I do not think it is done efficiently.

Q. Some people think there should be an efficient inspection under the direct superintendence of the Government—what do you think of that?—A. Certainly that should be done; everybody agrees to that. This is a big trade, and now is the time to make it safe and secure. Although it may cost us a little money now, we will get every penny of it back by-and-bye if we make those superior arrangements.

This concluded the evidence of the witness.

C. M. ACER, of the City of Montreal, President of the Grand Trunk Stock-yard Company, who already gave his evidence in this inquiry, was re-called by Mr. James Allan, Advocate, representing the Allan Steamship Company, and gave the following evidence:—

By Mr. Allan:

Q. Give us your opinion as regards union stock yards, and the facilities on the wharf for the loading of cattle?—A. I think, as regards union stock yards, it would be a very good thing for the trade if the parties interested should agree upon them; but there is a difference of opinion as to their location. Some people wish to have them at the east side of the harbour and some at the west, but I do not think we have got so far along as to have union stock yards. I think that the two railways, the Grand Trunk and the Canadian Pacific, and the city of Montreal, have all to do with this matter, and nobody else; and whatever talk we may hear about this matter, is of the smallest consequence. I think we have got as fine accommodation here now, and as good means of handling cattle in Montreal as any place on this continent, and perhaps our accommodation is just a little better. So far as the steamship companies are concerned, they are all right, and if the railway regulations were changed a little there would be no trouble about the matter at all. A great deal of this trouble is caused by the cattle exporters themselves, who try to get the advantage over one another on the steamers, so that they may save a little by getting their cattle on board at once, instead of having to feed them at the stock yards. They sometimes bring cattle down and keep them on the steamer for two or three days before she sails. If they would request either of the great railway companies to load their cattle on the cars at 10 o'clock and put them down by the side of any steamer at the port, the company would agree to it. The cattle could arrive at 12 o'clock at night, and the loading could begin at 3 o'clock in the morning. I am sure that the steamship companies are not half as bad as some people would try to make them appear. They would very readily take all the merchandise they could out of the road, if they were told that cattle would be loaded at a certain part of the wharf. I do not think there would be half so much talk about this matter if there was not a little stock yard scheme at the bottom of it all. I think we have first-class facilities on the wharf here for handling cattle if people wanted to avail themselves of them, and I do not think that either the Harbour Commissioners, the railway companies or the steamship owners are much at fault. If the cattle exporters say that they want their cattle brought down in cars I will guarantee that the Grand Trunk Company will bring them down in cars and deliver them on the wharf at night. As a matter of fact, the cattle-owners drive the cattle down to the wharf from choice.

Q. As a matter of fact, during the summer months all the cattle are loaded at night?—A. Yes.

Mr. CUNNINGHAM.—Only distillery cattle?—A. I have loaded farmers' cattle at night.

Q. There is a rule in the Grand Trunk Railway saying that only distillery cattle shall be loaded at night?—A. You know very well that you ship lots of farmers' cattle down there on the cars.

Mr. CUNNINGHAM.—I know nothing of the kind.

Mr. ACER.—If the Grand Trunk were asked to ship every single bullock on the cars they would do it. The Canadian Pacific Railway Company would do it also, and there is no reason why the other railways would not do it also. We had this question a short time ago before the French Board of Trade, and there was a good deal of talk about union stock yards. I say that union stock yards are all right in their way, but at the same time it must be remembered that we have a large sum of money expended on stock yards, both at the Grand Trunk and at the Canadian Pacific Railway. I can say, also, that there is not any better accommodation on the continent than we can give them right here in Montreal.

Mr. PRICE (Cattle Exporter).—The worst accommodation in America is at the port of Montreal. I am longer in the business than any man in this room, and I know more about it.

Mr. ACER.—You have as good accommodation here as you have anywhere.

Mr. BICKERDIKE.—You will admit that the accommodation for loading cattle in Montreal is not as good as the accommodation in Boston?

Mr. ACER.—I will admit that it is just as good in Montreal as in Boston. It is as good in Montreal as in Boston, if it is asked for. If you ask the Grand Trunk Railway they will give you first-class accommodation.

Mr. PRICE.—Are you aware that the Dominion Live Stock Association has asked for better accommodation before, and that nothing was done for them.

Mr. ACER.—I do not know anything about what the association asked for, but they must ask for something they must expect to get. We are just as far ahead of Boston, to my mind, as we can be.

By Mr. Greenshields:

Q. This specially good service at Montreal, which we have heard your refer to, has reference to one of the railway stock yards. Which one do you refer to specially? —A. I refer to both the Grand Trunk Railway and the Canadian Pacific Railway stock yards.

Q. The Grand Trunk Railway stock yards are operated by the Montreal Stock Yard Company?—A. Yes, sir.

Q. Of which C. M. Acer is the president?—Yes, sir; and they are a good company, and I am not ashamed of them.

Q. And that stock yard is largely controlled by you?—A. Yes, sir; the Canadian Pacific Railway can run into the East End abattoir, where there is large accommodation for cattle, and the Grand Trunk Railway can run into the West End abattoir, where there is also large accommodation.

Q. Who owns these abattoirs?—A. They belong to a joint stock company.

Q. Of which C. M. Acer is president?—Yes.

Q. And these constitute the great accommodation for stock which competes with anything on the Continent of America?—A. Yes, sir; they may not be as large as some others, but they are ahead of the trade here.

Q. Now, the creation of a union stock yard at the port of Montreal would very materially interfere with the revenues which are enjoyed from the stock yards and the abattoirs of the present time?—A. Not the slightest; we are not afraid of anything of that kind.

Q. Would you prefer to have the union stock yard here?—A. I might prefer it under some circumstances.

Q. That is, if you had a controlling interest in it?—A. If I had something to say about it—yes.

Q. But if you had not, any interest in it, and if it was controlled by the cattle exporters, you would not want it here?—A. It might suit me under some circumstances.

Q. Under what circumstances?—A. Well, there is no doubt but what they would buy me out, and buy me over after I got out.

Q. At the present time the stock yard accommodation is largely controlled by you?—A. No; Mr. Bickerdike has a larger stock yard than mine. He controls the

Canadian Pacific Railway stock yard, which belongs to a line that runs from the Atlantic to the Pacific.

Q. Which stock yard receives the most cattle in the year?—A. I think the Grand Trunk Railway does.

Q. And these cattle, when they stop over waiting to be loaded on the steamer, have got to pay tribute to your stock yard?—A. Not any more than they do in any other place. They have either to go to my stock yards or to the abattoirs, or to the Canadian Pacific stock yards.

Q. They have got to go either to the Canadian Pacific Railway or to the Grand Trunk stock yard?—A. I may say that Mr. Cunningham, who is sitting beside you, posting you, used to be a clerk of mine, and he knows my business pretty well and will probably try to let you get at the bottom of it.

Mr. CUNNINGHAM.—That has nothing to do with the case at all. I am not giving away your business because I was your clerk. I am not saying anything about your business.

By Mr. Greenshields :

Q. It is a matter of notoriety that you are president of these two companies?—A. I do not think this Commission cares whether I am or not, and I do not think this investigation has anything to do with my business at all. The yards in Chicago, New York and other places are run by the railways, and if the railways here see fit to ask Mr. Bickerdike or myself to run their stock yards, you have nothing to do with it. There has been talk here about a union stock yard, and that they are going to run all the line steamers down to the East End. The last gentleman who was here was going to bring the cattle and lighters up against the current. It would be just as easy, if not easier, to have the abattoir at the West End of the harbour.

By Mr. Smith :

Q. Are the facilities as good here for shipping cattle as they are in Boston?

Mr. JOHN ALLAN.—If, as Mr. Acer says, the railway companies bring down all the cattle in the cars the facilities will be as good here as in Boston.

Q. And you have experience at Boston?—A. Yes.

Mr. ACER.—We are in a better position here than they are in Boston. We have stabling here for 3,000 head of cattle, and electric light, and everything else.

By Mr. Greenshields :

Q. Do you know Mr. Plimsoll?—A. I have seen the gentleman.

Q. Were you talking with him here?—A. Nothing in private; all our conversation was public.

Q. Did you agree to help him in every way possible to kill the export trade of live cattle from this country?—A. I did no such thing. It would be foolish for me to do anything of the sort, even if I were disposed to do it.

By Mr. Smith :

Q. Are you in favour of sending the dressed beef to England?—A. I cannot say that I would be against it, under certain circumstances. At the present time we are not ready to send dead beef to England, and I am not contemplating any such thing. That report has been set on foot, but there is nothing to it.

By Mr. Greenshields :

Q. You are president of the Montreal Dead Meat Company?—A. No; I am not.

Q. You are a large stockholder?—A. Yes.

Q. You are not exporting any dead meat yet?—A. No, sir; we have not got that far advanced. We are not looking forward to anything of the sort.

By Mr. Smith :

Q. Whether do you think it would be better to ship live cattle or to ship dead meat from this country?—A. I am in the live cattle trade as much as any man in

this room, and perhaps just a little more than some of them. At the present time I do not think we are ready for the export of dead meat.

By Mr. Greenshields :

Q. You are not ready until your company is in shape to handle the dead meat, and then you think the country would be ready, too?—A. Let us deal with facts. We are not ready for anything of the sort. The kind of cattle we want for the dead meat business are not here, but I think they will soon be here.

Q. Where will they come from?—A. From the West.

Q. Can the Ontario farmers raise cattle, and fatten them and kill them and ship over the dead meat to compete with the American West?—A. No.

Q. He has got to buy his food?—A. The Canadian farmer has not to buy his food.

Q. Does he have to buy his corn?—A. No, sir; he can feed his cattle on roots, hay, peas and oats, and in some portions of western Ontario they raise just as good corn as they do in the United States.

Q. But there is a large quantity of Western corn brought into this country for feeding purposes?—A. Only by the Grits, and in their minds.

By Mr. Smith :

Q. Do you think it would be a great injury to this country to stop the live cattle business, and to oblige us to send over dead meat?—A. I am not prepared to say, because I am not a dressed-beef man, although some of these people here suspect me. I am not in the dead beef business yet, but I think all these gentlemen here will be in it in five years. When you carry a dead bullock across for £1, I do not think they can continue to pay £4 for a live one. It will be against the steamship business if they have to carry over dead meat—but I think they are pretty well disgusted with the cattle business now, and they will try and get into something else.

Q. It is generally supposed that it would be ruinous to the country to stop the live cattle business?—A. It would be ruinous to a few; there is no doubt about that. I think if it were known how much money is made out of the business, it would be found not to make much difference whether it was stopped or not.

By Mr. Greenshields :

Q. Do you not think it is an advantage to sell the Canadian cattle in the open market, rather than to sell the dead carcasses?—A. I used to think that. When I first went over with cattle that was the case, but every year it is getting nearer the dressed beef business. I have received letters from England, when freights were high, recommending us to sell our cattle in the spring of the year, when freights were lower, and have them slaughtered in the lairs and sold as dressed beef. Our good cattle would sell for as much dead as if they were alive. We are getting nearer and nearer the day when John Bull will want the dressed beef.

Mr. CRAIG (Cattle Exporter).—Do you believe that a dead carcass will sell for as much as a live animal?

Mr. ACER.—I do; do not you?

Mr. CRAIG.—I do not.

Q. Do you think the privilege which we have of sending our cattle into England alive is not of benefit to the country generally?—A. I most certainly do. But I must tell you that I think this privilege is not so much of a benefit as it used to be. Of course, if we only send over "stockers" to England for killing purposes they would not be any use at all; but why not fatten them here, and you will have an advantage in the low rate of freight for dead beef, and also by keeping the horns and skins in this country, which is a considerable advantage to the country. There is a good deal of valuable stuff which remains of the animal after the beef is taken out. As a rule, the hides are worth more here than in England, and if we kept them here we could make them into leather. I want these gentlemen to disabuse themselves of

the idea that I am a dressed-beef man. I am not any more so than any other man in this room.

Q. You have no interest in it?—A. I have no interest in it, nor have I any scheme by which I am working any such thing. I think, however, the dressed beef trade will come. Any man who went to England ten years ago knows that there was not one quarter of American beef sold where there are a hundred to-day.

Mr. CRAIG.—And we ship ten times as many live cattle now as we did then.

Q. If a Canadian animal is shipped alive to England, and killed by the English butcher, it is sold as English beef, is it not?—A. Invariably—yes.

Q. And if an animal is killed here and the meat sent over, it is sold as American beef?—A. It is very often sold as English beef in the shops. The butchers play it off as English beef, no matter where they get it from.

Q. Is the dead meat not worth a great deal less to the Canadian farmer and to the Canadian shipper?—A. I do not think so, if the beef is good.

Q. You think the American beef will bring as much money in the English market as the English beef?—A. I think it is getting nearer that every day. Some of them advertise American beef now for sale, and five years ago they would not dare to do any such thing.

By Mr. Smith :

Q. When these Canadian "stockers" are sent over they are fed for six months or more by the English farmers and sold as English beef?—A. Yes; they fool the public.

Q. There is no fooling about it. Are not these cattle as good as Scotch cattle?—A. Some of them are and some of them are not.

Q. You mentioned that cattle were put on board the ship sometimes a day or two before she sailed. Did you ever know an instance of that?—A. Oh, yes; and Mr. Allan can tell you all about it.

Mr. ALLAN.—There have been instances of that kind.

This concluded the evidence of the witness.

MONTREAL, January 7th, 1891.

At half-past ten on the morning of this seventh day of January, 1891, the Inquiry was resumed in the Board Room of the Harbour Commissioners, Montreal, Mr. Wm. SMITH, Deputy Minister of Marine presiding.

JAMES EAKINS, of Port Hope, in the Province of Ontario, Cattle Exporter from Canada to Great Britain, deposed as follows :—

By Mr. Greenshields :

Q. Mr. Eakins, you are a large exporter of cattle to England?—A. Yes, sir.

Q. How many cattle did you ship to England this year?—A. About 12,000 head.

Q. You are one of the largest exporters in Canada?—A. Yes; I think so.

Q. What proportion of the cattle that you exported this year were fat cattle and what proportion of them were "stockers"?—A. I should think they were about 8,000 "stockers" and 4,000 fat cattle.

Q. Was that about the proportion of fat cattle to "stockers" usually shipped to England?—A. Yes; the "stockers" are about two-thirds of the export.

By Mr. Smith :

Q. How are these fat cattle fed in Canada? Are they distillery cattle?—A. No, sir; farmers' cattle.

Q. They are fed by the farmers throughout the winter?—A. Yes, sir.

Q. Are they better than distillery cattle?—A. I do not know that they are; they compare about the same.

Q. You have heard the evidence of the other cattle exporters given during this inquiry?—A. Yes.

Q. Do you agree in the main with the views expressed with regard to the modifications and changes which should be made in the export cattle trade?—A. Yes.

Q. Do you think there should be Government inspection?—A. Yes; I think there should be a Government Inspector appointed.

Q. What is your opinion as to the space which should be allowed for fat cattle?—A. I think each fat animal ought to be allowed a space of 2 feet 8 inches, and that five "stockers" might be put in the place of four fat animals.

Q. You employ foremen to take charge of your cattle on board ships?—A. Yes, sir. We have experienced men to take charge of the cattle going across, and some of them have been in my employ ever since I commenced shipping, about ten years ago.

Q. Have you ever gone over with any of your own cattle on board ship?—A. No, sir.

Q. Where do you get your foremen?—A. We get them in Montreal. They live here, and make a regular business of it. They are trained men in the business.

Q. Do you get a report as to the condition of the cattle when they land there?—A. Yes. My salesman on the other side, usually sends us a letter back, as to how the cattle land.

Q. And what generally has been the report as to their condition?—A. They are generally landed in fair and good condition.

Q. Do they improve on the voyage?—A. If they have sufficient space and a good passage they generally improve on the voyage.

Q. Is there more danger to the cattle going across during the fall months?—A. Yes, I think there is more danger.

Q. Do they suffer on the upper deck during the fall?—A. I do not think they suffer much from the cold. They suffer more from spray and heavy weather than from anything else.

Q. Your evidence is that in the fall they suffer a little more on the upper deck?—A. Yes, sir.

Q. Do you think it would be a good thing that cattle should not be shipped on the upper deck in the Fall?—A. I think the cattle are all right during the fall on the upper deck, if the vessels have permanent fittings.

Q. You think that if the fittings are good and permanent there is no inconvenience or danger to the cattle in the Fall?—A. None whatever.

Q. And much depends on the character of the fittings?—A. Yes.

Q. Do you recommend these light temporary fittings?—A. I do not. I think a great many of the cattle are lost on account of them.

Q. In either summer or winter?—A. Yes.

Q. And if the steamers adopted good permanent fittings and 2 inch plank coverings, and so on, you think the losses would in a great measure be stopped?—A. I think they would indeed, sir.

Q. You recommend permanent fittings in all seasons of the year?—A. Yes.

Q. And do you think a Government regulation to that effect would be a good thing?—A. Yes; I think it would.

Q. It would cost a little more to the ships in the first instance, but I suppose it would be cheaper in the end because they would have these fittings permanently?—A. Yes, that would be case; they would always have the fittings on hand.

Q. What do you think as to the value of steam fans on board cattle ships, when the weather is bad and the hatches have to be battened down?—A. It would be a great improvement if all the cattle vessels carried steam fans, and it would be much better if they had them.

Q. Do you think it would increase the safety of the cattle?—A. Yes; I think it would increase the safety of the cattle, and I would strongly recommend that they should be used.

Q. I am told that they are not very expensive to fit up and that once they are put in position they could be used for all time?—A. Yes, that is so; every cattle vessel should be compelled to have them.

Q. You have heard what was said about the danger of cattlemen going amongst the cattle in the dark with lanterns, and it was recommended that they should be fitted up with electricity? Do you think it would be an improvement to have electric light on these steamers?—A. It would be a great advantage if we had electric light, and I should think it would not cost a great deal.

Q. Have you seen the cattle shipped from the port of Montreal?—A. Yes; I have seen my own cattle shipped here.

Q. Have you seen the cattle stowed on the hatches of the steamers?—A. Well, they generally crowd them on board first, and put them on the hatches afterwards, when the hatches are fitted up for their reception.

Q. How do your foremen report that the cattle are taken care of?—A. My foremen report that the cattle are generally very comfortable on the voyage, that they lie down when they like and are always well cared for.

By Mr. Greenshields:

Q. Have you read this book that is published by Mr. Plimsoll?—A. I have just looked over the portions of it where he refers to the treatment of the cattle.

Q. Has your experience been that the statements contained in this book are true?—A. No, sir; that is not my experience. My experience is that they are not true.

Q. You have never seen the cattle loaded heads and tails at this port, as described in Mr. Plimsoll's book?—A. No, sir; I never saw any such thing.

Q. You have seen the cattle lie down on the voyage?—A. Yes.

Q. Is there any cruelty to these animals in the manner in which they are taken across to the Old Country?—A. No, sir. It is the interest of the shipper and of the men in charge of the animals, and in fact it is in the interest of every body connected with the trade, to carry over these animals in good condition. It would be against the interest of all parties if they were badly treated, because they would depreciate in value.

Q. And there is no insurance covering depreciation of value?—A. No, sir.

Q. You have read the recommendations of the Board of Underwriters as to the modifications and changes which they wish to make in reference to the cattle trade?—A. Yes.

Q. Do you agree with these recommendations?—A. Yes, sir.

By Mr. Smith:

Q. Do you not think it would be an improvement if no cattle were carried on the hatches, so as to leave the hatches available as an hospital for injured cattle and as storage for water barrels, &c.?—A. There are some ships with very large hatches on which cattle might be carried, but there should be part of the hatches always left to hold barrels for water and the like of that. I think it would be very necessary.

Q. What do you think about the facilities for handling the cattle in the port of Montreal?—A. The facilities were very bad last summer. The volume of this trade at the port of Montreal has doubled within the last two years and it is difficult to accommodate it. The difficulty would be got over almost entirely, if the steamships would get their other cargo on board and the stalls all fitted up for the cattle when they are ordered down from the stock yard. If that were done there would be no difficulty whatever. The trouble now is, that they load the cargo and the cattle at the same time.

Q. That is to save a few hours for the ship?—A. Yes.

Q. Have you ever put cattle on board the ship at the same time they were putting on other cargo?—A. Yes; nearly every time that I load cattle that is the case.

Q. And the stalls are not built for the cattle, sometimes, when they are put on board?—A. No, sir; they are putting on cargo, building stalls and loading cattle all at the one time.

Q. How do they get the cattle on board if the stalls are not built?—A. They double them up in a crowd until the stalls are built and then put them on board.

Q. Would that not be like the way shown in this picture published in Mr. Plimsoll's book?—A. They are not put in heads and tails. They are tied up in some of the other stalls until their own stalls are finished and then they are put in their own stalls.

Q. Do these difficulties apply to the "tramps" or the regular liners, or to both?—A. It is better on the regular liners, because they have their stalls ready, as a rule.

Q. Do they load dead cargo and live cattle at the same time on the regular liners?

—A. Yes; it is done on the regular liners, the same as on the "tramps."

And this concluded the evidence of the witness.

WILLIAM W. CRAIG, Cattle Exporter, of the City of Montreal, representative of Robert Craig & Sons, of Brampton, Ontario, and Bater & Williams, of Liverpool, England, gave the following evidence:—

By Mr. Greenshields:

Q. How many cattle did you ship to England last year?—A. Between seventeen hundred and two thousand.

Q. You have heard the evidence given here by the cattle exporters?—A. Yes.

Q. And you know the recommendations that were made by the Dominion Live Stock Association, and by the Board of Underwriters to the Government?—A. Yes.

Q. Do you agree with these recommendations?—A. Yes; principally.

By Mr. Smith:

Q. Which of these recommendations do you not agree with?—A. I agree with mostly all of them. I do not think, however, that I would lay the regulations down as a hard and fast rule, without leaving any discretion to the inspector. I would leave some discretion to the Government inspector, whom it is proposed to appoint.

Q. Most of the witnesses said that they would prefer the rules and regulations should be made by the Government and that the inspector should carry them out.—A. I think occasions would occur when such hard and fast rules could not be carried out.

Q. What kind of a rule or regulation could not be carried out?—A. Why, with reference to putting cattle on the hatches. I think it would be a hardship for steamers not to be allowed to put cattle on the hatches, although as a general rule it would probably be better that they should not put the cattle on the hatches.

Q. You heard the reasons that were given against putting cattle on the hatches, namely, that the hatches should be left for water barrels and for an hospital for sick cattle, and for other conveniences for the men in charge of the animals?—A. Yes; but some steamers have hatches 24 feet long and some have hatches only 12 feet long. We had one outside steamer here, this year, called the "Sorego," which had a hatch 26 feet long, and which took up nearly the whole of the centre of the compartment. In cases of that kind, I think the inspector should be allowed some discretion in the matter.

By Mr. Greenshields:

Q. You have read this book of Mr. Plimsoll's, have you?—A. I have read extracts from it with regard to the treatment which, he says, cattle received on the journey across the Atlantic.

Q. Are the statements made in this book, in regard to the treatment of cattle, correct?—A. No; they are not correct.

Q. You have no doubt about that?—A. No doubt whatever.

Q. You never heard of cattle being abused and beaten to keep them awake, and of their not being able to lie down for sixteen days?—A. That is all nonsense.

By Mr. Smith :

Q. Did you ever make a passage across with the cattle?—A. Yes; I have been on steamers that carried cattle. I had foremen on board these steamers.

Q. Did you make the passage on a regular liner or on a tramp?—A. Both on regular liners and tramps.

Q. And how were the cattle treated on board ship?—A. They were treated as well as it was possible to treat them.

Q. You saw the cattle on board ship every day?—A. Yes; and there was no cruelty whatever to them. They laid down and got up again whenever they liked.

Q. Could all the animals lie down again at the same time?—A. Yes, sir; they could.

Q. And they were taken care of most comfortably?—A. Yes.

Q. I suppose it would injure them if they were kept in a feverish state for want of rest, and were not allowed to lie down?—A. Yes, sir; it would injure them very much, and they would consequently depreciate in value.

Q. Do you approve of the ships employing the men to take charge of the cattle?—A. No, sir; I do not. I think that the owners of the cattle should send their own foremen in charge.

Q. Do you think that the cattle men should be subject to the discipline of the ship, and put on the articles?—A. Yes, sir; I do.

By Mr. Greenshields :

Q. Are the facilities on the wharf at Montreal sufficient for the handling of the cattle trade?—A. I think they are, under certain regulations and with certain improvements.

Q. Had you ever any trouble in shipping your cattle?—A. Yes, sir; I had a good deal of trouble shipping them.

Q. In what way?—A. The steamer had not completed her cargo, before the cattle were ordered down from the yards. I think if the steamers complete their cargoes before the cattle are brought to the wharf, and if the cattle are brought down in the cool of the morning, it would be a very great improvement, and most of the steamers could then be loaded in two or three hours. If we commenced to load about 3 in the morning, and the steamer has all her stalls completed and has finished her other cargo, I think the cattle could be loaded and go to sea quite comfortably.

Q. Does not the cattle shipper arrange with the owner of the steamer about this?—A. It has not been done heretofore.

Q. Why does not the owner of the cattle go to the agent of the steamer and arrange as to the time to bring the cattle from the yards to the wharf?—A. They order the cattle down before the steamer has completed her cargo. It is the general rule that they say they are ready for the cattle before they are actually ready.

Q. I suppose that is done so that the steamer will not be delayed?—A. Yes; that is the case. And in such an instance the cattle are kept on the wharf, and teams are constantly driving through them, which is a great hardship on the cattle.

Q. There could be no Government regulation as to that, I suppose? It appears to be a matter of arrangement between the owner of the cattle and the owner of the ship?—A. If it were made a regulation that a ship could not take any cattle on board until she finished loading her dead cargo that would obviate the difficulty. I do not think it is any hardship on the cattle to drive them from the yards to the steamer in the early morning, when there is no traffic on the wharf, but I believe that cattle should not be loaded in Montreal during the hours that there is traffic on the streets, and during the heat of the day. Of course, the distillery cattle must be taken down in the railway cars.

By Mr. Greenshields :

Q. If the steamer was not ready for the cattle until the afternoon, you would not drive them down in the morning and leave them on the wharf?—A. In such a case as that you would have to wait over until the next morning.

Q. And I suppose the steamers are not willing to do that?—A. The steamers, as a rule, do not wish to do that. They generally sail at daylight in the morning.

Q. It would be some hardship on the steamship owners if a regulation was made that the cattle could not be loaded until all their regular cargo was on board. The cattle would be left on the wharf, and the steamer might lose, perhaps, five or six hours, in taking the cattle on board, after she finished loading her other cargo?—A. It is quite possible the steamer might be delayed, but I heard the steamship owners tell us during this inquiry that if it were not for the cattle trade they could not bring their steamers here at all.

Q. You think the steamship companies ought to make some concessions for the benefit of the trade by which they exist?—A. I think so.

By Mr. Greenshields:

Q. It is since this investigation opened that the steamships are taking a correct view of the importance of this cattle-carrying trade, is it not?—A. I do not know about that. I think the steamships companies, generally admit the importance of the cattle trade.

Q. Are you in favour of the steamers being allowed to put the hay and the feed on top of the stall?—A. I am not: but I will qualify my objection to that. I think they ought to put sufficient hay on top of the stalls to do them for a day or two going down the river, up to a certain time in the year. I think once the wet weather commences, in the fall of the year, there should not be any hay on deck, and all the feeding should be under cover. It injures the hay very much if salt water gets to it.

Q. What is your opinion as to the shipping of cows with calf? It has been said that they should not be allowed to be shipped?—A. I am not of that opinion at all, and I think it is a mistaken idea. The cows are well accustomed to being handled, and to the stable, and they are generally gentle creatures, and I think cows with calf can be shipped as safely as heavy bulls can.

Q. You have heard it described how there was considerable difficulty with them calving on board ship, and that some deaths occurred in consequence. Do you not think there is more risk and loss in shipping cows in calf?—A. I do not think there is very much risk if they have a space of 2 feet 8 inches. If that space is allowed them I think they have plenty of room. I think cows that are near calving should be put four in a stall, the same as fat cattle.

Q. I suppose there are very few cows shipped?—A. Last year there have been a good many cows shipped, and some of them with calf.

Q. What do they do with these cows and calves when they get to the other side?—A. They sell them, and as a rule they sell much better than "stockers."

Q. Do they sell them for farm purposes?—A. Yes.

Q. You think it would be a bad thing to make a rule that cows in calf should not be shipped?—A. Yes; I think it would be a bad thing. I have a cutting here from the *Dundee Advertiser* which contains an article on the "stocker" trade and on the shipment of cows. I will read this article from the *Dundee Advertiser*, because it contains some interesting information and bears directly on the cattle trade:—

"DUNDEE *Advertiser*, 17th December, 1890.

"THE CANADIAN CATTLE TRADE.

The cattle which were landed at Dundee last week by the steamer "Kehrwieder," from Montreal, were sold by public auction at the cattle depot yesterday. There was a large attendance of farmers and feeders, and there was a brisk demand for the different classes of stock. The prices brought were the highest that have yet been obtained. Best class of bullocks brought £16 10s.; smaller sorts, from £10 10s. to £13; heifers, from £10 15s. to £12; cows, £20 5s. The 600 head offered for sale were quickly disposed of.

"THE SEASON'S TRADE."

The first season's trade in Canadian cattle to Dundee has proved in every sense a thorough success. Farmers, whose wants, in the first place, were the main consideration, have been highly satisfied with the Canadians; butchers who bought fat stock and dairymen who filled their byres with cows from the far West have been equally pleased; while the Dundee Harbour Trustees have derived a handsome revenue from the trade. A few unfortunate delays in selling the cattle, owing to the Government restrictions, took place; but with these exceptions, the different cargoes were cleared off with remarkable rapidity. It was observed that, as a rule, cargoes that were kept at the depot for three or four days, and were well rested before being sold, brought better prices than those cleared off almost immediately on landing. The local demand for Canadian cattle was almost phenomenal. For years Canadians have found their way into local fairs and auction marts, and owing to their cheaper price and general good qualities they met with a good demand. The total cattle shipped from Canada to Dundee this season is 9,146, and 120 head of sheep have also arrived. The deaths have not been numerous, although on one steamer as many as 187 died, in consequence of the stormy weather encountered on the passage. The total number of deaths was 237 cattle and 3 sheep.

"The Canadian cattle may be said to have now penetrated to all parts of Scotland, portions of several cargoes having been forwarded by the salesmen to different towns in the east and north of the country. The farmers who bought store cattle, especially those who made their purchases early in the season, have had every reason to be satisfied with the results. Amongst Canadians it is generally regarded that there are three grades—the first, fat cattle; the second, good store stock of excellent breed; and the third, of rough build and coarser fibre. The finest qualities are unfortunately in the minority. All Canadians, however, it has been proved, take on flesh very rapidly. Sometimes 'homes' or Irish will be kept four, five or even six weeks before there is any appreciable difference in their condition, whereas on Canadians the improvement is apparent in a week or ten days. The prices got for fat Canadians are below those for 'homes' or for Irish; but occasionally, if they are polled, and are of good appearance and quality, they bring the average price. By the introduction of large numbers of Canadian cattle into Scotland the system which at present prevails will be slowly revolutionized. Farmers will not raise their own stock, except in the hill districts, and the Irish trade will be generally circumscribed. A few seasons, with several hundreds of cattle arriving at the port of Dundee weekly, will in due time result in a substantial reduction in the cost of all store cattle, and that in turn will reduce the price of beef. Canadian cows have proved good milkers, the demand for them throughout having been great. Already a number of cattle which were brought to this country in the first consignments have been sent to the fat-cattle markets, and these show a higher return for the period kept than either Irish or home-raised.

Canadians which were purchased in Dundee at the beginning of September at prices ranging from £11 to £14 after three months' keep have left from £5 to £7 profit to the farmer, and in one or two instances a higher rate has been obtained. Home-reared cattle this year has proved far from remunerative. In the spring they were scarce, and were selling at so exorbitant prices that in September they barely brought their purchase price. It will therefore be seen that the introduction of Canadian cattle to the district has proved a great boon to farmers. The desire of agriculturists to secure these cattle, however, told against themselves, as the prices ruling at Dundee were among the highest at any ports. At Glasgow the price is less, and in several instances Forfarshire farmers have purchased these, and have found that after paying the freight of their cattle home they were still well under the Dundee figure. Appended is a table showing the number of cattle and sheep shipped for Dundee at Canadian ports, and the total which died or were washed overboard on the passage:—

Cattle and Sheep Shipped for Dundee at Canadian Ports, &c.

Vessel.	Head Shipped.		Lost.	
	Cattle.	Sheep.	Cattle.	Sheep.
Gerona.....	833		1	
Steinhoff.....	583		1	
Fremona.....	736			
City of Lincoln.....	911			
Serica.....	643	120	2	3
Norse King.....	533		2	
Gerona.....	760			
Fremona.....	726		1	
Michigan.....	956			
Serica.....			9	
Norse King.....	635		17	
Gerona.....	696		187	
Kehrwieder.....	589		1	
	561		16	
Totals.....	9,146	120	237	3

We see from this statement that the losses were only trifling, except for the loss of 187 on the "Norse King."

Q. What do they ascribe that loss to?—A. To the heavy weather.

Q. Had it anything to do with the unfitness of the vessel for carrying cattle?—A. No. I believe the "Norse King" is a good cattle-carrying vessel, but she met with extremely heavy weather, and that caused the loss. I understand that the farmers in Scotland who have bought our cattle early in the season and fattened them up have every reason to be satisfied with the results. The Canadian cows are very good milkers and make excellent dairy stock.

Q. You would not recommend that there should be a rule made that no cows in calf should be shipped from this country?—A. No; there is no hardship for cows on board ship, but I would make it an order that cows heavy in calf should have a space of 2 feet 8 inches. I would pay more for the space for cows than for "stockers," and place them on the same footing exactly as distillery cattle.

Q. In that case, if the cows had each a space of 2 feet 8 inches, do you think they could calve without injury?—A. Yes, sir; and especially if the hatches were cleared they could take the cow out to calve on the hatch. This would be a very strong reason why the hatches of a vessel should be kept clear from cattle.

By Mr. James Allan :

Q. Suppose the fore holds of the ship were completely loaded with dead cargo, would there be any objection to the cattle being ordered down to be loaded on this part of the ship? Would there be any objection to load the cattle on the fore part of the ship while they were completing the loading of the after part?—A. I do not think there would be much objection to that.

Q. It would not cause loss of time?—A. Yes; and it would be a matter of arrangement so long as it did not interfere with the loading of the cattle. If there is no dead cargo being loaded on the same part of the ship as cattle are being loaded on I think there would be no difficulty.

Q. Is it not a fact that it is practically impossible to complete all the stalls before the ship sails?—A. Yes; there must be some of them left not fitted up, especially where the gangways are on the deck.

Q. Is it not also a fact that cattle steamers have to stop at Quebec to take cargo on there, and that they must keep space, open for taking that cargo on?—A. Yes.

Q. It need not be a very large space but still there must be some space?—A. Yes; where steamers take cargo at Quebec some space must be left open.

By Mr. Greenshields :

Q. If it were a warm day, do you think it would be advisable to put part of the cattle on, and let them remain on board for six hours—say, until they finish loading the dead cargo?—A. In very hot weather it would not be advisable.

Q. And in taking the cattle down to the wharf, even though they were loading another part of the ship, would not the cattle come in contact with the cargo that has been brought down on the wharf? Would not that practically mean that they are loading cargo and cattle at the same time?—A. Yes; but they sometimes load dead cargo at the same end of the ship as they are loading the cattle on, and that is worse still.

Q. If they were loading cattle at one end of the ship and cargo at the other, the carts and drays which are carrying cargo to the ship would have to pass through the cattle. Is it possible to keep the cattle separate from the other cargo, although they are being loaded at another part of the ship?—A. I do not think it could be done.

By Mr. Allan :

Q. Do you not think it would be possible to make arrangements so that the cattle and dead cargo could be separated? Is it not possible to get over the difficulty?—A. I do not see how the difficulty could be got over.

By Mr. Greenshields :

Q. Is it not a fact that the working of the donkey-engine and the noise and confusion frightens the cattle?—A. Yes; it is a great objection. It frightens them, and makes them much more difficult to handle.

Q. And it is more difficult to get the animals into their stalls, is it not? —A. Yes; there is no doubt about that.

Q. It is not very often that these ships stop for cargo at Quebec?—A. On some lines they frequently stop there.

Q. How many cattle vessels, do you suppose, stopped at Quebec last year?—A. I do not know that.

Q. You do not know the name of any boat that stopped at Quebec for dead cargo?—A. I cannot particularize, but I know it was a common practice with the regular liners.

By Mr. Smith :

Q. Do you think it is a good thing to allow cattle to be shipped on the upper deck during the whole season, down to November?—A. I think so. I think when cattle are lost on the upper deck that the cattle on the main deck stand a very poor chance—that is my experience.

Q. Do you think that the fittings on board these steamers should be permanent? —A. I think it would be better if they were made permanent.

Q. Do you think that steam fans are necessary?—A. I think steam fans are necessary, and a great improvement; and if it were practical to have electric light on the cattle steamers it would be a good thing for the cattle men.

Q. Do you think that transient vessels are as well suited as the regular liners for carrying cattle?—A. I think that most any kind of steamer is good enough to carry cattle up to the first week in September, and I think statistics will prove that.

Q. But you think they are not good enough after the first week in September? —A. We want the best steamers we can get after the middle of September.

Q. You think the trade would be made safer if these suggested regulations were carried out?—A. I think it would.

Q. And you think in that event there would be fewer losses?—A. Yes; there would be fewer losses.

Q. You would not like to ship your cattle on a tramp steamer late in the fall?—A. No, sir; unless she was an extra good steamer.

Q. And you approve of Government inspection in connection with the cattle trade?—A. Yes, sir; I strongly approve of a Government Inspector being appointed in addition to the present Veterinary Inspector.

This concluded the evidence of the witness.

GARRETT F. FRANKLAND, of the City of Toronto, Cattle Exporter, gave the following evidence:—

By Mr. Greenshields:

Q. Mr. Frankland, you are an alderman of the city of Toronto?—A. Yes; sir, I was until the end of the year.

Q. For how long have you been exporting cattle to Great Britain?—A. I have been exporting cattle from the commencement of the trade.

Q. And you understand all the necessities of the business, and the disadvantages of the manner in which it is now carried on. Will you state to the Commission your views upon the question as to whether there is cruelty or not to the animals as to how they are treated, and what remedies you suggest?—A. I will do so.

Q. Have you ever crossed the Atlantic in a cattle boat?—A. About sixty times, sir. I generally travel from choice in a cattle boat, so as to observe the treatment the animals receive on a voyage. I do not know that I can state anything new in connection with this trade, either to the cattle exporters or to the Government, or to the ship-owners, that they do not know themselves. I will preface my statement by saying that so soon as the fat animal is taken from its place to be sent either to the home market or to a foreign market the quicker it gets into the hands of the butcher the better for all concerned. Therefore, I have always had a desire, before I moved my cattle from any part of the Province of Ontario to the port of shipment, to know when the ship would sail, and to have my cattle debark from the railway cars at Montreal as nearly as possible to the time the ship sails. I have suggested to the Government through the press, for years, that an independant wharf should be built for the reception of these cattle, and from that one wharf every ship should be loaded with live stock, after the ship had taken on its dead cargo. Notwithstanding what may be said as to the cruelty to cattle, one-half of the battle is to send your stock quiet and composed on board ship from any place from which they are embarked. It has been a continual mistake, from the inception of this trade up to the present, that the cattle have hardly ever had an opportunity of leaving the port of Montreal in that comfortable condition in which they should leave it. Cattle are naturally alive to noise, and although Canadian cattle are probably the strongest constituted animals that I know of in any portion of the world, yet I have seen them in a profuse state of perspiration, languid from the noise on the wharfs at Montreal, and from the noise of these donkey-engines on board the ships. This is largely due to the loading of live cattle on board the steamers at the same time as the dead cargo is being loaded. This system should not be permitted to continue. If it were determined and insisted upon that ships should first finish taking in their dead cargo before they load cattle, and if the steamer was then taken down to the cattle wharf to take on her cattle, and immediately went to sea, without stopping at Quebec, a great deal of this trouble would be avoided. The little cargo they take on board at Quebec is not of much consequence, but still it is a detention to the ship of several hours sometimes. I have stopped in Quebec for twelve hours, and my cattle have suffered more during that twelve hours of detention in Quebec than they have suffered all the way across the Atlantic.

By Mr. Smith:

Q. Would it be practicable for all the ships loading in Montreal to go to a particular wharf to get their cattle, considering the difficulty of moving in the current?

Do you think you could get the shipowners to consent to that?—A. I think the shipowners would consent to almost anything before they would give up this great industry, and I do not see anything against the statement I am making that the Harbour Board, together with the Dominion Government, should build such a wharf and make such arrangements. Of course the engineering department will tell better than I can how that can be done. It could not be very difficult for one ship after another to go down to that cattle wharf and take on her living cargo. Here there would be no obstructions, no noise and everything would be in repose, except the cattle moving. It would be astonishing how quickly one ship after another could be loaded in this manner. I hold that we could load a dozen ships a day from a cattle wharf, quite as easily as we could load two ships now, with all the confusion that is going on. It is not altogether the confusion about the ship, but the continual traffic on the wharf that injures the cattle. Your cattle are obstructed and knocked down on the Montreal wharf by these miserable long drays or carts—these two wheeled things that carry barrels on the wharf and which take an enormous space in order to turn around. Sometimes I have seen cattle knocked down with these machines turning on the wharf. We should have stock yards in Montreal near the wharf with one avenue out of these yards on which the cattle could be walked down quietly and put on board ship.

Q. You are suggesting a plan which I am informed it would be very difficult to carry out. The shipping owners say that it would be almost impossible to move their steamers down to this wharf. You seem to think it would be quite easy, and we will take your evidence for what it is worth?—A. I think it would be a very easy matter. Now, when it is understood and determined upon by the Government what is the proper space required for each animal on board ship, this regulation should be faithfully carried out by a responsible officer appointed by the Government, and this has not been done heretofore. I think that each fat animal should be allowed a space of 2 feet 8 inches. We do not want too much space, for it would probably be a hardship for the cattle to have too much space if the ship was rolling heavily, but we want enough space for the animals. The instinct of the animals soon teaches them how to assist and protect one another during a storm at sea. Where there are four or five cattle together, it would astonish you how quickly they get into the movement of the ship and help one another in keeping their feet. I would not ask for the shipping company to give me a partition for these cattle, but sometimes when you come to a cross-sea, it would be well if you could put a partition between each two cattle and only have two animals standing together until the storm passes over; With good men in charge of the cattle, that could be easily arranged with the assistance of the instinct of the animals. We want alley ways at least 2 feet wide and clear of all obstructions so that the men may be enabled to attend to the cattle without difficulty. We want to have cleats fixed in the stalls, of sufficient strength so that an animal has something to hold its feet on to in a storm; a straw bed or a smooth board will not enable a bullock to keep its feet. Sheep are very tenacious in keeping their foot-hold, but even sheep with all their tenacity cannot keep their feet without the assistance of a cleat in a heavy sea. The cleat should be so arranged that a bullock could preserve its equilibrium by placing its feet against that cleat. That cleat should be so fitted as that it could not break away, and I may mention that I myself have lost a few cattle through these cleats giving way. There should always be an abundance of straw and hay on board ship. After all that has been said about the men who attend the cattle I must say that, with the exception of one trip, I never saw a man who neglected or abused his cattle, and he must be an extraordinary man, and a man of peculiarly constructed character, who would neglect the poor brutes going across the Atlantic. A man would have to be very sea sick indeed when he would neglect his cattle. We might get better men to cross the Atlantic with the cattle if the men were better treated on board ship. I was about to say if they were looked upon more as human beings, and if they had a certain part of the ship to which they could retire for rest and where there would be a certain amount of comfort for them. Their food should be prepared for these men in charge of cattle,

and they should have comfortable beds to sleep in. I do not ask that they should be given luxuries; but I want to see that they are treated as men. If these poor fellows got a certain amount of care and attention they would be far better men. Now with regard to ventilation on board cattle boats. I am glad to see that great improvements have been made lately with regard to the ventilation of these steamers. No one could condemn such a line of steamers as the Allan line. I do not suppose that in all their steamers there is one of them that you could condemn, and I am sure if there were any improvements that could be suggested to a large and respectable line like that they would be glad to carry them out. The Beaver line and the Dominion line, and the lines represented by Mr. Reford, are of the same character; but we have a few, what might be called really outrageous tramps, coming here, and which probably before the Plimsoll's mark was established, would be simply sent out here in the hopes that they might never be heard of again. I crossed in a steamer called the "Peri" with 600 cattle, and some one remarked that if the cattle were not well insured she would get across. I did not like her very well and she did go down the next voyage. I can mention one or two others of the same kind. With what I have said about the quiet loading of the animals, the getting of them away from this port in good condition, proper ventilation on board ship and room enough for them to rest, you can take cattle across the Atlantic to-day with as much safety and comfort as you can convey passengers. I maintain that our Canadian cattle will bear as much fatigue as any cattle in the world. There is no danger of pleuro-pneumonia in this country, and what we have to guard against as much as anything else is to preserve their lungs from getting any disease. Some say that the animals do not lie down altogether on board ship, but I do not think that it is necessary that they should. I have 700 head of cattle in my stable up in Ontario. I have them standing two together, and I may find four hundred single animals in the stalls where they have plenty of room, lying down, and the others standing up. When a bullock that is standing up, thinks the other has been lying down sufficiently long, and is getting a bit selfish, he knows how to make that bullock stand up in very short time, and then he lies down himself. While I am speaking on this matter I may mention that the Honorable Mr. Carling, Minister of Agriculture, knows the regulation about the space which should be allowed animals on steamers, but it has not been attended to.

MR. SMITH.—It has been reduced in size in some cases.

MR. FRANKLAND.—It has been reduced in size to suit those who wanted it reduced in size. The space which should be allowed to each animal, must not be left at the mercy of the exporter or shipowner. It must be regulated by the Government and not allowed to be departed from. You, Mr. Commissioner, in the position you hold here, to-day, can remove every evil in connection with the live cattle export trade and enable Canada to do a great work as it should be done and to benefit by this growing industry. Canada cannot do a trade in the export of dead meat during May, June, July and August and we must depend on the export of live stock. Now, sir, I want to say further: That I do not care for winter shipments. They may be all right, but I do not care for them. We have had some discussion here to-day about the exportation of milch cows, and with all respect to my friend who gave his evidence just now, I do not think a ship is a good place for maternity. I will ship no milch cows, nor will I ship any cows with calf. I do not want anything to do with that trade. Our trade at present, is principally in "stockers" and fat cattle, and these can be shipped during the months of May, June, July, August, September and October, and I would consider that the Government was not using Canada harshly if they should legislate that, after the first of November, no live cattle of any description should leave the Dominion of Canada. I would not consider that our Government was doing anything to injure the proper development of the agricultural resources of this country if they passed such a law. I would like to see live shipments of cattle put a stop to, after the month of October, for after that you have a cold atmosphere, and if you wished you can export dead meat without

any danger. I think that the shipment of cattle during the 6 months I have mentioned, will satisfy Canada for half a century.

Q. Do you think cattle should be allowed on the upper deck in the fall of the year?—A. They may be allowed on the upper deck during the months I have referred to, as long as they have substantial coverings which are part and parcel of the ship.

Q. It is proposed to have angle iron frames and planks 2 inches thick. Do you consider that would be a sufficient covering?—A. I am not a mechanic, but I think these fittings would be safe. It would take a very heavy tidal wave to wash off the fittings that I would erect for cattle. It is not that you have to protect the cattle from the heavy seas, but from the changes in the weather as well. The great object of the exporter is to get his cattle landed as quickly as possible, so that they may have their bloom when they arrive in the market and nothing shows ill-treatment so quickly as a dry hide of a dingy dirty colour. I took cattle to London this year and sold them against the cattle of the Norfolk farmers, and in both appearance and quality they were just as good as any cattle in England. It is ridiculous to think that these beautiful cattle that we have in Canada should be slaughtered here and sent over as dead meat. A bullock loses all his beauty to me when he gets into two sides of beef. I would like to mention in this connection that I utterly condemn any of this meat that is put in tins or cans, which business I think they are about to attempt in Montreal. I think in these days of sanitary matters it will come to this, that people will not buy any of this canned stuff. Anything that is put in tins where solder is concerned, is not healthy in my opinion. I will go further and say that beef carried in these refrigerators is not as healthy or desirable for human beings as the meat of healthy cattle which are killed and given to the public as soon as possible.

Q. Do you recommend steam fans for ventilation in all cattle-carrying boats?—A. I do sir. My attention was specially called to steam fans here, and I tested some of them. I saw a steam fan worked on a steamer for about 8 hours. It was either on the "Lake Superior" or "Lake Ontario"—I forget which—and when I went down below the air was as clear as it could be, and it was extraordinary how comfortable everything was and how easy you could breathe below deck. It must be remembered that where a man cannot breathe easily cattle cannot breathe either; where a man can live a bullock can live, and a bullock cannot live much longer than a man in bad ventilation and bad air.

Q. Do you recommend that vessels should be lighted by electricity?—A. I do not know that I would ask for electricity in fine weather.

Q. It would be adapted for bad weather as well as for fine weather. It has been stated that the cattlemen cannot go down with lanterns in their hands and attend to cattle properly?—A. Well, they have done so up to the present time, and I do not think I would ask for electricity. I would not like to ask for anything that I thought was unreasonable to the shipowners. As I told you at the commencement of my statement, that if we get our cattle well on the ships here without excitement, the animals would be in good condition. We have got a fine stretch of river here down to Belle Isle, and we have only four and a half days between Belle Isle and the Irish coast. In fact, the Dominion of Canada and Great Britain appear to be made for one another to run this cattle business. I have no sympathy with the United States, and I do not care what they do over there. I am only working in this matter for the interests of our own people, under our own flag.

By Mr. Greenshields:

Q. You evidently do not believe in annexation?—A. Oh, no. I am with our own Government and I know they will do what they can for us. You will have to find some roundabout corner by which our cattle can be exported to England. The two nations must be one.

By Mr. Smith:

Q. Would you prohibit cattle from being taken on deck after the 1st of November?—A. Yes. I would not care if cattle were prohibited altogether from being carried on the Atlantic from the first of November until the first of April. Of course, I do not ask for that for there are men who can ship and will ship these stockers throughout the winter months, it can be done and it has been done, and it can be done very well, I suppose, if the cattle are well treated and there is no overcrowding. I remember the last year that Lord Dufferin was here, I bought some prize cattle at the exhibition, I think about 200, and I sent them from Montreal on the "Lake Nipigon" of the Beaver Line. There were 800 cattle shipped by another man at the same time, and we could not get them insured under 10 per cent. I did not insure the cattle on that ship. I have crossed the Atlantic 17 times, and I have crossed with \$30,000 or \$50,000 worth of living stock, without insuring them; that shows you how well this cattle business can be done if it is carefully conducted. We sailed about the first of October, and we had heavy weather all the time, and we got that cargo of living cattle across safely, with the exception of 2 sheep, which I thought looked sick and looked piteously at me, so I cut their throats and delivered them in two carcasses of mutton and lost nothing by them.

Q. You have seen no cruelty of any kind in taking cattle across the Atlantic? A. I cannot conceive anything of that sort; it is out of my line altogether. If I saw a man ill-treat a bullock or a sheep or a horse, I would punish him so severely—not by the law, but by myself—that he would never do anything of the kind again. I cannot conceive a man being unkind to dumb animals.

By Mr. Greenshields:

Q. Any time you crossed you have never seen any cruelty to animals on board ship?—A. No; I never have.

Q. Do you advocate that the exporter could employ his own men?—A. I would like a shipowner to employ his own men to run his ship, and I would not like to put my cattle in charge of any men that I was not sure of. I send some of my own men over with the cattle, who have been in charge of them for 7 or 8 months before, and the animals actually know their voices when they speak to them.

By Mr. Smith:

Q. Do you believe that the men attending on the cattle should be put on the ship's articles?—A. I believe the men ought to be put in that position, that if a captain wished to correct them on board ship, he should have full power to do so.

Q. What is the accommodation given to the cattlemen on board ship?—A. It would make you weep to see the accommodation some of them receive. Not on respectable lines, like the Allan, the Beaver and the Reford's, but in some of those other ships. Even these good lines, which ought to be above suspicion, might improve the accommodation for the men.

Q. What accommodation do they have?—A. They are not placed in as comfortable a part of the ship as I would like to see them placed in. 9 or 10 bunks are put together and the men are not at all comfortable. Their food should be presented to them in a little better style than it is now.

Q. How is their food presented to them now?—A. In tin vessels that might have been encrusted with German silver at one time, but which have lost every appearance of it now.

Q. Do they set a table for these men to eat their food on?—A. Not much of a table. There is a table in some of the ships, but that is not much to speak of either. I am referring now to the treatment of the underhands and not to the foremen. They eat their meals on the hay or anywhere else they can, and sleep on the hay, but I must admit that with the class of men that have been going over in charge of cattle, you would hardly know where to put them, because some of them are n'er-dowells and are prepared to go across for nothing.

Q. Is it not a fact that in some cases they had no beds to sleep on?—A. That is occasionally the case. Not that a bed of hay is uncomfortable in June, July or August, but when it comes to the cold weather and when you want blankets, they should have a sleeping place.

By Mr. Greenshields :

Q. Even on a bed of hay, I suppose they would not care much about taking their clothes off?—A. The cattlemen do not often take their clothes off from the time they leave Montreal until they get to England, and then they are not in a very nice state.

Q. Do you not think that if the accommodation was better, and that these men were treated differently, it would have a tendency to elevate them?—A. Yes; it might make the poor fellows think more of themselves.

By Mr. Smith :

Q. Do they have as good accommodation as the sailors have on board ship?—A. Not as good, sir, by any means. It ought to be arranged that the cattlemen should have as good accommodation as the sailors. The Government have made arrangements as to the manner in which steerage passengers should be carried, and steerage passengers on our goods steamship line have plenty of food and some to spare, and I think that some arrangement should be made by which the cattle men should be properly treated.

Q. Do you believe in the system of putting hay on top of cattle stalls?—A. I would not object to have sufficient hay on the stalls to take the cattle down the river, but when the hay gets wet, it is not good for the cattle. There should be a covering over the food for the cattle. It has always been wrong, in my opinion, to put cattle on the hatches of a vessel. Suppose a fire should start down below and the hatches were filled with cattle it would be very dangerous. No cattle should be put on the hatches.

Q. Do you think that a cattle exporter should be allowed to insure his cattle wherever he likes?—A. Yes; it is quite proper that a man should be able to do what he likes with his own. However, I cannot say that I object very much to the arrangement of the steamships owners insuring. There was a little fight made against it at first, but it turned out very well. It all the improvements and suggestions made were carried into effect, and the animals were properly cared for, we would need no insurance on our cattle, for we would carry them all alive.

Q. How long do you think cattle should be rested after arriving in Montreal, before they are put on board ship?—A. I think cattle might be rested very well on board the ship. That is my experience. If we had a cattle wharf here and they were put quietly on board the steamers the animals would be very well rested there.

By Mr. Smith :

Q. Are you against transient steamers being employed in this cattle-carrying trade?—A. I do not know that I should encourage them. It interferes with established business and there is no reason why there should be "tramps." If a steamer is a good steamer, it should be something more than a "tramp." Where a ship is supposed to carry the officers and sailors safely across, it should be in a position to carry live stock, and I would never load a ship with live stock on which I would be afraid to go myself.

This concluded the evidence of the witness.

ARCHIBALD J. THOMPSON, of the City of Toronto, cattle exporter, gave the following evidence :—

By Mr. Smith :

Q. Will you please state your views on this question of the cattle export trade between Canada and Great Britain?—A. I can corroborate Mr. Frankland's statement. I think he has explained almost everything connected with the trade, and I agree

generally with him. I think that a space of two feet, eight inches by eight feet should be given to the animals, and I certainly think that no less space for the animals would make them comfortable. I have crossed myself with cargoes of cattle and I am satisfied from my experience that if they had this space, and if the recommendations made by the Dominion Live Stock Association were carried into effect, the cattle could be carried across the Atlantic with safety and comfort.

Q. I suppose you would put five "stockers" in the place of four fat cattle?—

A. Yes; I think they would have sufficient room in that space. There is one other essential thing for live cattle on board a steamer, and that is a good supply of fresh, pure water. I do not think any ship should be allowed to carry cattle that could not supply at least twelve gallons of fresh or condensed water for each animal per day.

Q. Do you think that should be a regulation to be enforced by a Government inspector if one is appointed?—A. I think that should be a Government regulation. In many of the ships they have two condensers to condense the water as they go along, but in some cases the water is hot when it is supplied to the animals. A ship that has not sufficient condensers to give cold condensed water to the animals should not be allowed to carry animals.

Q. Do the shippers make any arrangements as to supplying water for the cattle during the voyage?—A. There never has been any arrangement made for that by the shippers of cattle. They generally trust to the ship. There is another great grievance to the exporters where ships carry on three decks, which I wish to mention. I have had cattle on some of the very best lines leaving the port of Montreal, where the vessel has been loaded on the three decks and the cattle between decks would be shrunk sometimes, in many cases so as to decrease their value three or four pounds sterling per head. I refer to cattle which were carried on the "Orlop" deck. The ventilation from the "Orlop" deck comes through the hatches in the centre of the ship and it creates a terrible heat between decks.

Mr. JAMES ALLAN.—But would that be the case if the steamer were fitted up with steam fans?—A. If the steamer had steam fans we could overcome that trouble. These steam fans would bring the cold air in, and means should be taken to let the hot air out.

Q. What you refer to, was the case before steam fans were adopted?—A. Yes.

Mr. SMITH.—Could they force air into the lower deck?—A. The lower deck is very often cool, while between decks is very often too hot. The heat arises from the lower deck and gets in between decks.

Q. If the between-decks was properly ventilated by steam fans it would obviate the difficulty?—A. Yes; and I do not think that any ship that loads on the between-deck out of the port of Montreal and is not supplied with the fans is safe for the cattle. If cattle suffer on the voyage for want of air they are landed on the other side at a loss of £3 or £4 sterling per head, to the detriment of the exporter.

Q. How much weight would these animals so treated lose?—A. They would lose perhaps 150 pounds, and that would mean a terrible difference in the price and quality of your stock.

By Mr. Greenshields:

Q. About this water that you speak of. Do you think a supply of 12 gallons per head per day would be necessary for each animal?—A. I think that not less than 12 gallons per day should be supplied to each animal.

Q. The supply of water to the animals is entirely in the hands of the ship-owners?—A. Yes; the exporter has nothing to do with it, and each vessel should have sufficient condensers to keep up that supply of water. Of course, if the vessel could supply fresh water and carry it in tanks that would do as well. A great many ships have fresh water for the use of the animals all the way across.

By Mr. Smith:

Q. If the cattle had not enough water all the way across I suppose they would suffer considerably?—A. Yes; and they would greatly depreciate in value if they did not get as much water as they wanted.

Q. Have you crossed at any time in a vessel in which cattle were carried?—A. I have. I crossed with one of the first large cargoes which were sent to England in 1876. At that time the trade was not very well known and we could not get any insurance. In fact, we could not get a penny of insurance.

Q. What did you do when you could not get insurance?—A. Well, I insured my life for the value of the cargo and prepared to tie myself to a bullock's tail and go overboard with it if the ship went down.

To Mr. FRANKLAND.—I did not insure my life or the cargo when I went across.

Mr. THOMPSON.—We landed every bullock, except one, and that one was landed as beef and sold at as good a price as the others. We landed my cattle in a splendid condition.

By Mr. Smith:

Q. Did you see any cruelty to the animals during the voyage?—A. Not at all. They were just as comfortable as they would be in the stable, and they had plenty of room, plenty of air and plenty of water. You can ship cattle, if the arrangements are made, just as comfortable and as safely as you can keep them in your barn.

Q. Have you any objection to shipping cattle on the upper decks?—A. I think the upper deck is all right if it has solid fixings.

Q. What do you think about shipping cattle on the upper deck from September to November?—A. Well, from September out there is a great risk in it, and there always has been a risk. Of course, if the fittings are put up which are now proposed, it would be a great improvement.

Q. It is proposed to put up iron frames and 2-inch planking.—A. If a sea strikes them everything goes as well as the cattle. Of course, with these permanent fittings everything will be much safer.

Q. After September you would not ship on the upper deck?—A. I would not ship on the upper deck after September.

Q. Do you know that some of these vessels carrying cattle call at Sydney on the way out for coal?—A. There are some of Mr. Reford's Line call at Sydney for coal.

Q. Do you think that is any objection?—A. I think it is a great objection, and I think that even if they call at Quebec for freight during the hot months it is a great objection also. The vessels leaving this port which carry cattle should be supplied with coal and everything else, so that they would be ready to go direct to sea. Cattle are not like dead meat. Once they are put on board they should go right out to sea.

Q. Would you go the length of recommending that a Government rule should be made that no cattle should be carried on the upper deck after the 1st September?—A. No; I would not make it a rule.

Q. Would you leave it optional?—Yes; I would leave it optional to the people who want to ship.

Q. You would not prevent anyone from shipping cattle after September if they wished to do so?—A. I would not like to prohibit anyone from doing what they please, as long as it would not be against the law. They ought to know what suits their own business.

Q. Would you recommend that cattle-carrying vessels should be supplied with electricity?—A. That is a very good thing. There is no doubt that lamps are not sufficient light for the men who attend to the cattle, and I think it would be an excellent thing if we could have electricity on board.

Q. Do you approve of the suggestion of Mr. Frankland, that there should be no cattle taken on a ship until after all her dead cargo is on board?—A. Yes; I think that regulation should be made. I think that cattle could be brought from the cattle yards down to the wharves almost any time of the day if the ship had completed her other cargo. Of course, there is some difficulty on the wharves, but if a vessel were completely loaded before the cattle were brought down to the wharves in the day time, and if the cattle could go on board quietly and at once, I think it would be

a great improvement on the present system, and would save considerable cruelty to the cattle.

Q. What do you think of the suggestion that there should be a special wharf from which cattle would be shipped?—A. It would be a grand thing, but I do not know whether it is practicable or not, as I am not much of an engineer.

Q. Do you think that the ships could move conveniently about in the stream at this port?—A. I suppose there would be some difficulty in that for the ships, but still there are parts of the wharf here that might be set apart for shipping cattle.

Q. It would involve moving the vessel from one place to another, and they would have to take on a pilot, and so forth, and perhaps run a certain amount of risk?—A. Oh yes; it would be expensive, and perhaps it might be risky; but the cattle could be properly stored on the ship at Montreal and in other places before the ship is cleared from the wharf.

Q. You do not believe in storing the cattle on board after the vessel has started?—A. I do not believe in that. I do not believe in running 70 or 80 cattle, or 100, into the ship, stopping up the alleyways and putting the whole ship into confusion. Half of the cattle on the ships, or perhaps two-thirds of them, would not get anything to eat or drink for forty-eight hours after the ship sails from here if the cattle are not put in their proper places on the ship before she starts. There should be a regulation that the cattle should be fastened in the stalls before the ship gets her clearance from the port.

Q. Would you recommend that that should be made a Government regulation?—A. I would, by all means. It is very essential that that should be done, and then the cattle could be taken care of from the moment the ship sails.

Q. You think that should be done before the inspector gives a certificate?—A. Yes.

Q. And you approve of Government inspection of the loading of cattle?—A. Yes; there should be somebody appointed for that purpose. We should have an inspector for this, apart from the Veterinary Inspector.

Q. You think that with these improvements and additions, and under Government inspection, which does not exist at present, the trade would be very much improved?—A. Yes; the trade could be carried on without so much cruelty, and with perfect safety. I think that with these improvements cattle could be carried just as safely as if they were in their own stables.

Q. Would you legislate so as to put transient steamers out of the trade in the Fall?—A. I do not think so. I think that people should use their own judgment as to what vessel they should ship on, but the "tramps" should be under the same regulations as the regular liners, and this would make them come up to the standard. Let each ship go on her merits. There are some outside boats just as good as the regular liners.

Q. And if a transient vessel cannot come up to the requirements she would have to go into some other trade?—A. Yes; and if she has not the necessary requirements it would be better that she should.

Mr. FRANKLAND.—I think the British Government took measures to interfere with some of the "tramps" engaged in the trade.

Mr. SMITH.—It was stated that one of the vessels carrying cattle from Canada was scheduled and the British Government was evidently looking after the business when they did that; but I understand that that vessel has since been released from the embargo. When this evidence, which is now taken here, is submitted to the British Government, it will show them that we are taking an interest in the matter and taking precautions to regulate the trade. We have enough evidence now to show that if precautions are taken the cattle can be carried safely and comfortably across the Atlantic. We know that the insurance inspectors examine as to the accommodation of the ship, and that the Veterinary Surgeon takes every precaution to ensure that the animals did not suffer from pleuro-pneumonia, but it appears as if some other improvement ought to be made. I feel quite confident, although I

have no official authority to say so, that when evidence goes before the Imperial Committee, no legislation will be allowed injurious to the cattle trade of Canada.

Mr. J. H. ROUTH, of the City of Montreal, representing the Western Insurance Company, made the following statement.

On behalf of the underwriters, I would like to add to the evidence given by Mr. Popham, Mr. Bond and Mr. Riley, that I think no vessel loaded with cattle should be allowed to leave this port unless she has her full complement of coal on board when starting, so as to prevent her taking coal on at Sydney or any other port. I think this should be made a regulation. Vessels having to take coal on board have to change the animals around from one stall to another, and this does not tend to improve the animals. So far as stopping at Sydney is concerned, we should like to see that done away with. If she could not get her certificate before she had her complement of coal on board she could not go to sea, and if she had sufficient coal on board she could go right across without making any stoppage.

Mr. POPHAN.—In hot weather I would rather have it regulated that cattle ships should not stop at Sydney or Quebec.

Mr. ROUTH.—I would make my suggestion read: "That no vessel should stop to coal below Quebec. Before the vessel starts a certificate could be given to the master enabling him to stop for coal at Quebec, but not at any other port.

This concluded the evidence of the witness.

JOHN DUNNE, of the City of Toronto, *Cattle Exporter from Canada to Great Britain, gave the following evidence:—

By Mr. Greenshields:

Q. Mr. Dunne, you were formerly president of the Dominion Live Stock Association?—A. Yes, sir, I was president for three years.

Q. You are a large exporter of cattle from the Dominion of Canada to England?—A. Well, I do not know that it is a very large business, but I have been connected with it for thirteen years.

By Mr. Smith:—

Q. Please state whatever views you have with regard to the cattle export trade from this country to England, and what suggestions you have to make for its improvement?—A. I think I may concur in Ald. Frankland's views, with very few exceptions.

Q. Tell us in what respect you do not agree with him?—A. I understood Ald. Frankland to say that he would not wish to see any cattle exported on the upper deck after the 1st November. I think that with properly constructed fittings on the steamer of a permanent character no restriction need be made as to carrying cattle on the upper deck at any time of the year—that is, of course, if the fixtures on the upper deck are permanent. I do not think these 2-inch planks with iron girders are sufficiently strong, for I think the fittings should be permanent iron fixtures.

Q. Those would be permanent fittings. The ship will use them whenever she is carrying cattle. They would be made of angle-iron and 2-inch planking, instead of the 1-inch planking which is sometimes used at present?—A. The question is, is 2-inch planking sufficiently strong? I have had some experience in crossing the ocean with cattle, and I do not think so.

Q. Would not it be difficult to handle heavier fixtures than that?—A. I think permanent iron fittings would be better if they could be constructed.

Q. The other witnesses do not wish to impose any restrictions on the ships that would make the fitting up of them too expensive or too difficult, and the evidence seemed to agree that if the cattle were in properly constructed houses on deck they

can be carried over quite well?—A. I do not see any difficulty in carrying cattle across the Atlantic if each animal is allowed a sufficient space. That space should be 2 feet 8 inches by 8 feet, and nothing less.

Q. You think that the cattle can be carried on the upper decks of steamers at any time of the year during navigation if the vessels have proper fittings?—A. I think so;—yes.

By Mr. Greenshields :

Q. What have you to say as to the facilities for handling cattle at the port of Montreal?—A. The facilities at the port of Montreal are very imperfect at present. Mr. Acer, who was examined here, stated that the facilities at Montreal were better than at any port on this continent. It is quite possible that Mr. Acer, in making that statement, thought he was correct; but I do not think that Mr. Acer has sufficient practical experience to be able to define correctly when the accommodation is good or bad. Unfortunately for our trade, we have men in it who are interested in other matters outside, and who make it a point to sit in their offices and let their employes do the work. The cattle are probably never seen by these gentlemen from the time they come to Montreal until they are sent to England. I think no man is competent to judge in a matter of this sort unless he makes himself personally the inspector of the position of affairs.

Q. Do you inspect the loading of your own cattle?—A. I have been engaged in the trade for thirteen years, and I think it is safe for me to say that in all the business I have done I have not allowed cattle to be loaded without my seeing them, unless sickness prevented me. I live in Toronto, and I come to Montreal on purpose to see my cattle loaded on board ship. I have allowed very few steamers to leave this port unless I have personally supervised the loading, and as a result of this experience I am entirely satisfied that if the accommodation we now ask for were granted it would be sufficient.

Q. In what respects are the facilities at this port for the loading of cattle defective?—A. The taking on of dead cargo on board ship at the same time that cattle are being loaded is a great objection.

Q. Did you ever speak to the owners of the steamships which you chartered about this? Did you ever ask them about making arrangements to take the cattle on board after the cargo had been loaded?—A. I think this matter has been agitated for years, and I remember myself bringing it before the Minister of Agriculture in Ottawa. About three years ago, when I was president of our association, I went to Ottawa with a deputation and waited on the Minister of Agriculture to try and secure that the regulations we are now asking for should be carried into effect. We represented then that the space to be allowed for each animal should be 2 feet 8 inches. We had the pleasure of an interview with the steamship owners and the agents of the different lines in Montreal, and amongst other matters the lack of accommodation was spoken of. We referred to the want of accommodation, we referred to the loading of cargo while the cattle were being loaded, and to the annoyance and abuse which the animals suffered in consequence. As my friend Ald. Frankland said, the cattle received more abuse in one half hour on the wharf than they received on board ship during all the journey across the Atlantic.

Q. Could you not have arranged to have the cattle brought down to the wharves when the steamships were ready to take them on board?—A. I do not see how you can do that very well. It has been customary on the part of the agent of the steamship line to order cattle down before she is ready. He is anxious to get his steamer loaded, and possibly he may order the cattle down with a good intention, thinking that the steamer will be ready for them. Perhaps, owing to unforeseen circumstances, the cargo is not put on board as fast as it might have been, and the cattle have to remain on the wharf for some time. Probably when the cattle are ordered down the steamship owner thinks the vessel is ready for them, but this is not the case when we arrive at the wharf. He may order down some animals for 3 o'clock and other for 4:30, and then, most unfortunately, they all accumulate together on the

wharf and great confusion ensues. It has been one of the most difficult things imaginable to load cattle while this noise and confusion is going on. At our meeting in Ottawa it was understood and agreed upon that the space for each animal should be 2 feet 8 inches by 8 feet, although there was no Order in Council passed making that regulation. The steamship owners also agreed, I believe, that the cattle should not be loaded on board ship at the same time as the freight; but, unfortunately, no Government regulation was made as to this, and things went on the same as before.

Q. Was there an Order in Council passed regarding the size of the space?—A. Unfortunately for the cattle exporters, the arrangement was never put in the shape of an Order in Council. It was simply an arrangement between the steamship owners and the cattle exporters.

Q. Do you think this arrangement should be put in the shape of an Order in Council now?—A. By all means. We will never get what I consider justice to the trade until there is a Government regulation defining the size of the space.

Q. One of the regulations proposed is that the size of the space for each animal shall be fixed by Order in Council?—A. Well, if you do that I do not think there will be any danger in taking cattle across the ocean.

Q. But the Government cannot make a rule as to the time the cattle should be brought from the yards down to the wharf.—A. I do not think that is absolutely necessary. If the other cargo is all put on board the steamer before any cattle are loaded, and the agent of that steamer notifies the men of this, the cattle could be brought down in proper rotation and put on board the steamer. If they are driven down or put on the cars and taken down over night there would be no difficulty whatever if the steamer was ready for them.

Q. Do you think it should be made a regulation that cattle should not be loaded on the vessel until she has completed loading the remainder of the cargo?—A. By all means; I should like to see that an established rule, and I think it should be done.

Q. Would it not cause some detention of the vessel?—A. It possibly might, and I think it would; but any detention would be more than counterbalanced by the good condition in which the cattle would arrive in England. That would be a very material advantage and benefit to the steamship as well as the owners of the live stock.

Q. You think it would not interrupt the business of the steamships if this were done?—A. I do not think it would interrupt the business very much. It might be a question of three or four hours' delay at the utmost. I think there is not a vessel in the port of Montreal that could not arrange that the cattle should be ordered down from the yards in proper order and put on board ship in good condition. There is not a steamship which comes to Montreal on which the cattle could not be loaded in four hours when she is ready to take them on board.

Q. Do you recommend that all steamers carrying cattle should have steam fans on board?—A. I think that steam fans are a great improvement, and are absolutely necessary, in order that the cattle may have good air on board ship. I also think well of the proposition that cattle vessels should be lighted by electricity, but I am not an advocate of putting the steamship owners to too much expense. I know what it is to be without light in a steamer, and my experience leads me to think that you cannot illuminate a cattle steamer too well. If we had the electric light it would enable the men to look all the better after the cattle, as they could do their work with more facility. As I said before, I do not think you could illuminate a steamer too much for the welfare of the cattle; but if the fitting up of a steamer with electricity is going to injure the interests of the steamship people to any great extent I do not think I would recommend it.

Q. Still you would like to see a cattle ship lighted by electricity?—A. Certainly I would. For my own part, I would give a higher freight on a steamer lighted by electricity than on a steamer lighted in the old-fashioned way. I would feel that my cattle were more safe and that they were better attended to. There is great danger from oil lamps. I crossed in the steamers with my own cattle just to see what kind of treatment they got, and I should think they would be much better cared for if there were electric lights on board.

Q. You saw no cruelty to the cattle in going across the Atlantic?—A. None whatever. I crossed in 1878 with 391 cattle on the steamship "Ocean King." She was not as perfectly ventilated as she might have been, but I am satisfied that my cattle increased in weight on the voyage. We had a good voyage and ample accommodation for the animals, and I am satisfied that my cattle improved before they got to England.

Q. Did you see that all the cattle were lying down on board ship?—A. I saw they ate well and lay down well and got up again, and I am pleased to say, further, that they sold well in England. Of course, I made the voyage in the early part of June. It was a good trip, and the cattle certainly looked in splendid condition when they got to England.

Q. And you had no trouble in selling them?—A. Not a bit of it; but of course these were in the good old days.

Q. Do you think that since the "stocker" business commenced the trade is not so profitable?—A. I have experience in that this season, and I can say that the trade is not quite so profitable as it was before.

Q. Whether do you think the "stocker" export trade or the fat cattle trade is the more profitable?—A. I do not think I can answer that. I can answer with regard to a few shipments that I made but I have not made, up my books, and so I cannot say as to how the profits were. I do not think that the exportation of either sort of cattle left a very large amount to the credit of the exporters this year.

Q. And you think it would be a bad business for Canada if this trade in "stockers" or fat cattle were interfered with?—A. I think so. I see nothing to prevent this export trade in cattle, nor do I know any just reason why it should be prohibited.

By Mr. Greenshields :

Q. Do you think that the cattle exporter should employ his own men to look after the cattle during the voyage?—A. I do, by all means.

Q. You always employ your own men to attend to your cattle?—A. I have always done so, and I am very particular as to the foremen whom I employ. I have three foremen in my employment now, and one of them has been with me for thirteen years and two for eleven years.

By Mr. Smith :

Q. And they take care of your cattle all the time going across in the steamers?—A. Yes. They are experienced men. I pay them good wages, and they are faithful, good men. With every cargo of cattle that I send across the Atlantic I have experienced men in charge as foremen.

Q. Have you anything to say as to the manner in which the under hands are fed and accommodated on board these ships?—A. Yes; I could say a good deal on it, but I do not see how to remedy the evil. Certainly a great evil exists here. Some four years ago a deputation from the Dominion Live Stock Association waited on the different steamship agents, with a view of getting better accommodation for the men. Up to this time these unfortunate men had no beds or bedding, and their food was handed out to them, or rather they had to come and get it in pails, or anything they could get to carry it in. We waited on the steamship agents, and these gentlemen provided bunks for the cattle men, such as they have now on many of the steamers. These bunks consisted of little straw beds and a pillow and blankets. You will understand that men who would put up with the accommodation afforded them up to that time were not supposed to be very cleanly or tasty or they would not have stood it. We found, however, that all our energies in trying to get better accommodation for the men had been comparatively wasted. The beds and bedding which we got supplied some of the cattle men thought fit to tear up, or some of them took the blankets ashore and sold them, and in this way did everything they could to injure themselves and to prevent any improvement in their condition, although they possibly could not see it in that light. Since then we have tried to remodel the character of the men employed. We want a better class of men to take charge of our

cattle, but I do not see how we can get a better class of men until we can give them better accommodation. I am sorry to say that not being able to secure a class of men that would look after their beds and bedding, and do justice to the steamship companies, a great many of the companies have gone back to the old system, and neither bed nor bedding nor utensils are supplied the men.

Q. How do the men get their food?—A. Some of them take the pail they feed the animals with and carry the "scouse," as the call it, in it. They all eat out of the same pail. Sometimes, if they stand in well with the galley cook they will bring a big tin between them, and they will all eat out of this. It is impossible to expect that you can get men who respect themselves to go on board a steamer in this position.

Q. If the cattle men were put on the ship's articles it would entitle them to sailor's fare, and they perhaps would be better.—A. I really do not know what putting them on the ship's articles would entitle them to, but if it makes their condition any better they should be put on the articles.

Q. Do you pay the ship anything for the board given to these men?—A. No; in our contract the ship agrees to carry the men free and board them, and give them ample accommodation. As a general rule, the under hand cattle men are not nearly so well off as the sailors. If you could get the captain of the ship to respect these men a little more than he does it perhaps might be well to put them on the articles. If a cattle man has a recourse to the police magistrate for his rights it is very well; but if he goes to the steamship companies and makes a complaint, and the captain contradicts him, I will guarantee that the captain is believed before he is. If it improves the condition of the cattle men on board ship, I highly advocate putting them on the ship's articles. I might also say that there is a difficulty in this. The general character of the under hand cattle men has been in many cases of such a nature that some of them really do not merit any one interfering to get them proper food and proper accommodation. Unfortunately, on most steamers they have learned to look down on the ordinary cattle man as something too brutish to look on or to mingle with.

Q. Do the sailors look down upon them?—A. Yes; they all look down upon them, and if you give the captain great power over the cattle men, by putting them on the ship's articles, it is questionable if the captain will not exercise that authority more than he ought to.

Q. But the captain of a ship cannot treat a man harshly if he is on the articles. The moment a man gets on shore he can bring the captain before the magistrate, and have a penalty inflicted if he is not properly treated?—A. If that is the case, for God's sake put the cattle men on the articles. The only difficulty is as to whether the captain will recognize the cattle men as human beings.

Q. There has, I understand, been some objection to putting the cattle men on the articles of the ship, because for each man who is put on the articles the shipping master has to be paid a fee of 2 shillings?—A. That is something I did not understand, but if putting the cattle men on the articles of the ship improves their condition on board I think the cattle men could well afford to pay the 2 shillings, or if he does not pay it his employer could pay it for him.

Q. Do you think cattle should be carried on the hatches of a steamer?—A. I think the hatches ought to be kept clear, and that cattle should not be carried upon them.

Q. Do you believe in the practice of the shipowners insuring your cattle for you, or do you think the cattle exporters should have the right to insure their cattle wherever they like?—A. I think a man should have a perfect right to insure his own property in any company he chooses.

By Mr. Greenshields :

Q. You were the president of the Dominion Live Stock Association at the time representations were made to the Board of Trade about this system of the steamship owners doing their own insurance?—A. Yes; and the Council of the Board of Trade passed a resolution against the systems :

Q. That resolution was passed by the Board of Trade of Montreal?—A. Yes.

Q. And it was passed after considerable enquiry and investigation?—A. Yes.

Q. Do you agree with the principle of that resolution?—A. Yes, sir; I agree with it in every particular, and I think the resolution was supported by a similar one by the Board of Trade of Toronto, if I am not mistaken.

By Mr. Smith:

Q. Do the steamship owners charge you a higher rate of insurance than you pay to get insured outside?—A. That is very difficult for me to answer. Some steamship owners claim they are not charging any insurance, and that they are giving their insurance free. Knowing from my own experience the generous tendency of the steamship owners, I am rather surprised that they do not give us the ship for nothing, as well as the insurance.

Q. I suppose it costs money to insure cattle?—A. Yes.

Q. And your opinion is that the insurance is charged in the freight?—A. There is no doubt at all but that there is a certain portion of the freight charged for insurance.

Q. If they were asked to quote rates separately for the insurance, would the steamship companies do it?—A. I do not think they would. I have this further to say in regard to putting cattlemen on the articles of the ship. This difficulty exists at the present time, and I am afraid it will exist in the future, if they are put on the articles. The captain of the boat does not recognize the cattle men in that humane manner that he ought to do; and if we give him more power over these men it is a question whether it will enhance their value in his estimation and incite him to give them better treatment. If the cattle men are allowed to go on the ship's articles I would only agree to that on condition that they are not asked to do any duty outside that of attending to the cattle on board ship. I should not want them to assist in cleaning out the steamer, or such other work, as I am afraid some of the officers would expect from them.

Q. The fact that they shipped as cattle men would exempt them from that duty.

Mr. DUNNE.—I wish to say, with regard to the supply of water to the animals on board ship: I do not pretend to know the exact quantity of water that an animal will drink, but I have had a number of complaints from my foremen within this last year or two that they had not a sufficient quantity of water for the animals, and I am fully satisfied that these complaints were correct.

Q. Would you think it well to define in Government regulations the exact quantity of water that should be supplied to each animal?—I do not think so. You may take two animals together, and one would require four pails and another might require six pails. I think that the cattle men very soon find out what quantity of water an animal wants, and they should get as much water as they require. I maintain that the animals should have all they can drink, and if you stipulate that a vessel shall supply each animal with 12 gallons of water per day some might take less and some might take more.

Mr. CRAIG, (Cattle Exporter).—If you do not fix on some definite quantity of water you may not get any.

Mr. DUNNE.—I am satisfied that my stock has suffered considerably on the voyage on account of want of water, and that on the very best line of steamers. The steamships bind themselves to give the animals a sufficient supply, of water properly condensed. I have learned of late that a number of steamers supply this condensed water when it is hot, and not fit to drink by the animals. I do not know whether that is the fault of the engineer or not, but at all events the water should be cool before giving it to the animals. The water supply has not been of that quality it ought, and the result has been that the water sometimes physics an animal, and he is reduced, and refuses to drink more. The men have come back and complained to me that they did not get sufficient water, but the captain said he gave them plenty of water. However that may be, it is true, at all events, that the condition of the water would not allow the animal to drink it. There should be some regulation made by which

the steamers would be compelled to supply properly condensed water for the animals. Of course, we have the alternative of going to law with the steamship companies about it, but we find going to law a very difficult and a very bad paying thing. I had water brought back to me which was supplied in mid-ocean two years ago by one of the best steamers going out of the port of Montreal, and I know if a human being drank it it would act upon him as a medicine. It was about half salt, and there was some kind of oily matter in it. I went to the steamship companies to complain about it, but they told me it was impossible such water could be supplied from the condenser, and that the man who made the complaint wanted to strengthen his story, and dipped some water out of the ocean, and so on.

This concluded the evidence of the witness.

ANDREW WALLACE AIKINS, of Cooksville, Ontario, Exporter of Cattle from Canada to Great Britain, gave the following evidence.

By Mr. Greenshields :

Q. Mr. Aikins, you are a large exporter of cattle ?—A. Yes, sir ; I have been exporting cattle for thirteen years.

Q. You know the recommendations made by the Dominion Live Stock Association and the insurance underwriters with regard to improvements in the cattle trade ?—A. Yes ; I know them, and I approve of nearly all of them.

Q. Do you know of any cruelty ever being practised on animals on board ship ?—A. No ; I do not. I have crossed several times myself, and the cattle were always well treated. On one occasion, when I took a cargo of cattle to Liverpool, and when they were landed there, they played on the wharf, just the same as if they had been taken out of their own stables. I think they actually gained on the voyage on that occasion. I had very good accommodation on that trip. I think I had a space of 2 feet 9 inches for each animal, for at that time they had plenty of room on the steamers. All the animals could lie down at once, and they were quite comfortable. They took their food and lay down as comfortably as if they had been in their own stables.

Q. Do you believe in the cattle exporters employing their own men to look after their cattle ?—A. Yes, sir ; I do. I have had some of these foremen in my employment for thirteen years now.

Q. And these are experienced men, who know how to take charge of the cattle ?—A. Yes ; I would only send experienced men to look after my cattle.

Q. Do you believe in storing the hay on the top deck ?—A. I do not. I believe that the hay and food should be under cover. If the salt water gets on the hay the cattle will not eat it so well.

Q. Are the accommodations on the wharf at Montreal sufficient for the cattle trade ?—A. No ; I have always protested against the loading of dead cargo on board the steamers at the same time as the live stock were taken on board.

Q. Have you any other suggestions to make in reference to this matter ?—A. I went over several times with cattle, and I wish to say something in relation to the water supplied the animals. I found that each animal could drink easily from 12 to 15 gallons per day, and that less than that would not be beneficial to the animals, because they could not eat their hay or meal so well if they were short of drink. It requires a certain amount of water to keep a moisture up among the animals. I think also that with proper accommodation the animals are better on board the ship than if they are kept resting for twelve hours in the yards after they arrive in Montreal. The moment they are put on board the steamer and fixed up in their stalls they lie down and take matters easy. I have often seen cattle only loaded a few minutes on the ship, when the accommodation was good, and they would lie down at once and commence to chew their cud.

By Mr. Smith :

Q. You think the accommodation for shipping cattle is not good at the port of Montreal?—A. No, sir; it is not good. I have often seen teams with dead cargo driving their way through the animals, and it often causes them much injury and a great deal of inconvenience.

Q. Do you think that cattle should be carried on the spar deck all through the fall of the year?—A. Well, with good strong, fittings, on a good ship, I think they could be carried all through the fall. At all events, there is no difficulty whatever in shipping cattle from April to September.

Q. What do you think as to shipping cattle in the months of October and November?—A. You require good, strong fittings, with high bulwarks, if you ship cattle during those months. The fittings on the upper deck should be good, strong, substantial fittings, that the sea would not break down. The equinoctial gales come about the 22nd September, and if the fittings were not good the sea would be very likely to carry them away.

Q. Do you think that proper angle-iron frames and 2-inch planks would be strong fittings?—A. They would be better than we have had heretofore, but there might be some extraordinary storms, in which perhaps they might not be sufficient.

Q. Do the cattle suffer in November by being shipped on the upper deck?—A. "Stockers" are shipped in November, and their hair is long, and they are not as susceptible to the cold as others. If the fittings are good—and if they could have iron coverings it would be better—there is no danger in shipping in the Fall. Now, as regards the question of shipping cows in calf: I have shipped a great many cows in calf, and I think there is nothing objectionable in it, as long as each animal has a comfortable space of 2 feet 8 inches by 8 feet. I have shipped perhaps more cows than any other person, and I ought to be able to speak on that subject. If they have proper room they do not suffer anything on board ship.

Q. Do you know a vessel called the Kehrwieher? She went to Dundee, arrived on the 17th December, and there was great loss of cattle on board her.

This is what the agent says:—A. There is no doubt about it that there is a great deal in the captain's hands as to how stock is landed. If there is a storm, and the captain plunges right through it, there is great danger to the animals, and the further he goes south of his course the better it will be. As I said before, from April to September any ship well ventilated can carry cattle, but the difficulty comes after September. It would be a great improvement if better ships were employed in the cattle-carrying business after September. I find that in the Fall the larger a ship is the better she is. A ship that covers two waves at once does not knock the cattle around so much as a smaller one.

Q. You would prefer large vessels to be engaged in this trade after the 1st September?—A. Yes, sir; I think that large vessels would land our stock better.

Q. Have you made many passages across the ocean in cattle boats?—A. Yes; I have made quite a few. I think I have shipped about as many cattle as any man either in Canada or the United States, and I have made several passages across. At no time when I crossed in a cattle ship did I see the animals badly treated. They were always very comfortable on board ship, and everything went well. In fact, the cattle on board ship seemed to do a little better than they would in the stable.

By Mr. Greenshields :

Q. About how many cattle have you shipped this last summer altogether?—A. I have been connected with the shipment of about 33,000 head.

Q. What proportion of them were "stockers"?—A. About two-thirds of them were milch cows and "stockers".

Q. Did the exportation of milch cows pay?—A. It paid just about as well as any other part of the business. I do not think there is any difficulty in shipping cows if they have a space of 2 feet 8 inches. I think a cow should have as much space as a fat animal, so as to give her plenty of room to lie down.

Before I close my evidence, I wish to reiterate my statements, that I would always prefer to engage my own foremen, whom I am acquainted with, and to send them in charge of the cattle; and also that I would like that a ship would be completely loaded with her dead cargo before any cattle are put on board.

This concluded the evidence of the witness.

HENRY A MULLINS, of the City of Toronto, Cattle Exporter, deposed as follows:—

By Mr. Greenshields:

Q. Have you ever crossed with a cargo of cattle to England?—A. Yes; several times.

Q. Did you ever have any cows with calves on board?—A. Yes.

Q. How did they get along on the voyage?—A. First rate; I should think they got on better than the other cattle.

Q. Was there any greater mortality among them?—A. I never lost any cows on board. I have shipped some on every boat of the Allan Line that left Montreal for Glasgow this summer, and I never lost but one.

Q. How did you lose that one?—A. She got injured some way on board the vessel.

Q. Did you kill her?—A. The foreman told me she died.

Q. Did the insurance company pay?—A. Yes.

By Mr. Smith:

Q. Did you insure with the Allan Company?—A. Yes; the price of the insurance was included in the freight.

Q. And the Allan Company paid you?—A. Yes.

Q. What was the condition of the cattle on the voyage across the Atlantic?—A. Each time I crossed they were in the very best condition. Sometimes they were just as well as if they were in their own stable.

Q. In what boats did you cross?—A. The "Buenos Ayrean" and the "Alcides." I must say that the under hands in charge of the cattle were not used well, and even the foreman did not get a place to eat. They had also a bad place to sleep in.

Q. What boat do you refer to?—A. The "Buenos Ayrean".

Q. Is it an Allan Line boat?—A. Yes.

By Mr. Greenshields:

Q. Where do the cattle men sleep?—A. Up on shelves on a rack that they build alongside the cattle. They put up these bunks with coarse lumber just the same as they build the cattle stalls with.

Q. Did they have any beds to lie down on?—A. Some had a little hay and some had straw and a blanket to put over them. I did not go below to look at it, as I did not care to go near where they slept. I saw one foreman come out of his room, and he was wet, as the water had been leaking down on him, and then after that he lay for four days on the hay at the back part of the ship.

Q. Do you think the cattle were more comfortable and better attended than the men?—A. Yes; my cattle had a better place to sleep in.

Q. What about the food that was supplied them on board?—A. I think the food supplied to the foremen was all right. I looked into the room one time, and the food seemed to be very fair.

Q. Can you say the same about the food supplied to the cattle men?—A. No; I cannot. It was not good. They took one of the pails they were feeding the cattle out of and they filled it up with "scouse," and they all ate out of that.

Q. Where did they eat their food?—A. They ate it on the hatch. They would sit on a bale of hay and dip the "scouse" out of the pail with tins.

Q. Was that their food morning, afternoon and night?—A. That is what they got all the time.

Q. Did they get any tea?—A. Yes; they got some tea in a pail, but they always got this painful of "scouse" three times a day.

Q. Was there any scarcity of that?—A. No; they had all they wanted of that, but they were complaining about not getting any tables.

Q. How was the tea supplied to the cattle men?—A. It was supplied to them in one of the pails they were watering the cattle with.

Q. Did they have any knives or forks to eat their meals with?—A. No; some of them had a spoon.

Q. I suppose they had not any knives or forks?—A. No; they were not used to them, but at all events they said they could not get them.

Q. Did you ever see the cattle men served with any properly, cooked meat?—A. I did not.

Q. Did they get any potatoes?—A. Yes; they got very good potatoes, but no meat.

Q. There was no cruelty to the cattle coming across?—A. No cruelty whatever. My cattle were just as well off as if they were in their own stables.

Q. Did you see any fire started in their ears to make them stand up?—A. No; there was no such thing, but I saw the captain turn a hose on a man with a pipe in his mouth. There is not much fire allowed around a steamer. There was a small fire on board the steamer going across. One of the men met the captain, but did not know he was the captain, and he asked him was the fire out. The man had a pipe in his mouth, and the captain answered him: "Yes; it is out, and I will put your fire out too," and he turned the hose on him.

Q. Was the captain kind to the cattle on board the ship?—A. Yes; he was a very kind man. He put cleats where he thought the cattle needed them, and he would loosen the ropes if he thought they were too tight.

By Mr. Smith:

Q. You think the cattle were better off than the men?—A. Yes; they were much better off.

Q. Were there any cattle lost on that voyage?—A. Yes, ten head.

Q. Were there lost between decks or on the upper deck?—A. They were lost off the upper deck.

Q. How?—A. They were washed overboard.

Q. They were washed overboard, fittings and all?—A. Yes.

Q. What kind were the fittings?—A. Just the same as they are putting up all the time in the steamers.

Q. They were just boards?—A. Just boards, with posts to hold them on. The whole thing went over when the sea came, and the decks were cleared.

Q. Do you think if there had been iron frames with 2-inch planks of a permanent character there would have been any accident or any cattle lost?—A. I think it would be impossible for permanent fittings to go overboard.

Q. Then this loss occurred owing to the flimsiness of the structure?—A. Yes; the structures are sometimes pretty flimsy. I once saw a man roll a small bale of hay on to one of them and it broke.

By Mr. Greenshields:

Q. But that time that you refer to occurred during the heavy gales of last fall?—A. Yes; I think it was on the 1st November we sailed from here. The vessel was the "Buenos Ayrean."

By Mr. Smith:

Q. Do you think that cattle should be allowed to be shipped until the close of navigation on the upper deck?—A. Yes; with permanent fittings the cattle would be as well on the upper deck as between decks any time of the year. I should say that

I did not lose any cattle myself on board the "Buenos Ayrean" but that the ten head that were washed overboard belonged to another man.

Q. Should you think if there were permanent fittings, such as you have heard described here, the cattle would not have gone overboard?—A. If we had permanent fittings the cattle would be all right and we would not have lost any.

Q. Where the steamers insure for you; do you consider that you are paying the insurance along with the freight?—A. Yes; certainly. The freight was about 5 shillings a head dearer for cattle on the Allan than on the Donaldson Line, and that showed that it included the insurance on the Allan Line. I may say that I have shipped on every boat of the Allan Line to Glasgow last summer, and I only lost two cattle.

Q. Everything is satisfactory, you think, except the fittings on the deck?—A. Yes, I had four cows calve on the voyage out of the twenty-two I sent over.

Q. And were the cows all right?—A. Yes; they did first-rate. If cows get a little attention when they are calving there could be no objection to shipping them.

Q. And the four cows that calved did well?—A. Yes.

By Mr. Smith:

Q. Did they bring any higher price when they arrived there?—A. Yes; they brought more money than the ones that had not calved.

Q. Would you recommend that every vessel carrying cattle should have steam fans for ventilation?—A. Yes; that is a great improvement. I do not think we had any on the "Buenos Ayrean." On this voyage on the "Buenos Ayrean" the cattle went ashore better than when they started. I think they gained on the voyage, notwithstanding the bad weather.

Q. And all the cattle were comfortable on the upper deck?—A. Yes; they were all comfortable, both before and after the sea struck us.

Q. Do you think it would be an improvement to have the under deck lighted by electricity, so that the men would not be allowed to carry lamps in their hands?—A. They do not carry lamps in their hands now, except the man on watch. The lamps are hanging up. There was sufficient light for us to do everything from the lamps on board the last ship we crossed in; and there was, in my opinion, no need for electricity.

By Mr. Allan:

Q. What do you pay your assistants who take charge of the cattle?—A. I paid one \$15 and one \$5.

Q. That was for the round trip?—A. Yes.

Q. Do you think these cattle men fare any worse on board ship than they would in their ordinary course of life on land?—A. Yes; decidedly.

Q. Did you know what their food was?—A. I did not know. I do not think an analyst could tell what was in it.

Q. Did the men eat it?—A. They tried to, but I did not see many of them who seemed to relish it. They stopped after the first trial.

Q. Did they starve, then, for the rest of the voyage?—A. No; they had some bread and butter, and that was about all they had.

Q. Do you know whether they brought their food from the galley in a pail simply from laziness?—A. No; a man told me he had asked for a vessel to carry the food in but it would not be given to him. They then asked permission to take one of the cattle pails, and the foreman said they could take one provided they washed it out when they got through with it.

By Mr. SMITH.—So that there was more care taken of the cattle than of the men?—A. Yes.

Q. And the men had to wash out the pail after they were done with it, for fear the cattle would get anything that was not good?—A. Yes; we were particular about the cattle. The foreman on that boat had a very bad place to sleep in, and I think if Mr. Allan enquires of the steward he will tell him that the foreman waited on him and complained about the accommodation.

By Mr. Allan :

Q. Where did the foreman sleep?—A. Along by the engine room, somewhere. I saw one of the foreman sleeping on the hay in the hatch, because he said he could not sleep in his own room.

Q. Was that your foreman?—A. No; he was not my foreman. When he got tired on the hay he got the cattle men to give him one of the stalls in the rack.

Q. Why would he not go into his own room?—A. Because he said it was worse than sleeping on the hay.

Q. Did you go into the room?—A. Yes.

Q. Was it a comfortable room?—A. No; the wet was dropping through the deck.

Q. Where there cattle over that room?—A. I cannot tell you that.

Q. Was there a particularly bad storm when these ten head of cattle were washed overboard?—A. Yes; they all agreed that it was the worst storm they had ever seen.

By Mr. Smith :

Q. How many cattle had you on the upper deck?—A. I had only six on the upper deck. I had them in a very good place, and they were just as good as on the under deck.

Q. If the whole ship were fitted with iron stanchions and 2-inch plank you think that these animals might have been saved?—A. Yes; we would not have lost any of the cattle if that had been the case, because there would be nothing but a little spray come in where the opening was left between the planks.

Q. Do you think that cattle may be shipped all the season and through the month of November without any danger to the cattle?—A. Yes; I saw the steamer "Ottoman" come into Liverpool about the same time as we got there, and the cattle were just as comfortable on the top deck as on the other deck. She is a modern-built boat, especially built for the cattle trade, and has iron coverings all over.

Q. Does she use electric light between decks?—A. Yes; she has all modern improvements. She is the most modern boat in the cattle trade, and belongs to the Warren Line.

This concluded the evidence of the witness.

MARTIN BLISS, Cattle Exporter, of Compton, Province of Quebec, gave the following evidence:—

By Mr. Greenshields :

Q. Mr. Bliss, you are in the cattle business?—A. Yes; I have shipped cattle that I fed myself a few times.

Q. Have you ever gone over on a cattle ship yourself?—A. Yes, sir; I have been over with cattle four times.

Q. How are the cattle treated?—A. Well, we treated our cattle well.

Q. You looked after them yourself?—A. Yes, sir.

Q. They were properly fed and taken care of, and got across the Atlantic all right?—A. Yes; they were properly taken care of, and at no time have I had any trouble.

Q. Have you been across the Atlantic with cattle at different seasons of the year?—A. Yes, sir.

Q. Have you ever crossed in the month of November?—A. No, sir; I never went across in November, but I sent some over in November.

Q. Did the cattle get over all right in November?—A. Yes, sir; I shipped cattle about ten or twelve times, but I never lost one yet.

By Mr. Smith :

Q. Do you approve of sending cattle over on the upper deck in November?—

A. Well, I cannot answer that. I never went across myself in November, and I never shipped on that deck. I would prefer the upper deck, however, if it had proper coverings.

Q. You would prefer it if there were permanent fittings on the upper deck?—

A. Yes; with permanent fittings I would prefer it. I do not think that cattle should be prohibited from going across the Atlantic during the season that navigation is open on the St. Lawrence. When I first crossed with cattle I was a little fearful that I would lose my cattle, and I insured them; but after that I sent men across with the cattle that I knew I could trust, and I did not insure them. Out of all my shipments I think I only insured the animals once. If I were going to ship cattle through the summer months, I have so much confidence in good boats such as the Allan or Dominion or Beaver Lines, that if I went across myself with them I would not insure them. I do not think there is any danger whatever in the summer months.

Q. Do you think they are better taken care of on these regular line boats than on the "tramps"?—A. I cannot say as to that. I do not think there is any danger of losing cattle, but they need good attendance and constant watching.

Q. And you consider any of the regulation liners perfectly safe to ship cattle on?—A. I do. I do not think there is any danger of losing cattle on them. I think that if proper fittings were put up and the animals properly attended to they are as well off on the steamer as in their own stables. With proper watching and proper care there is no danger of losing any more animals on board ship than we would naturally lose at home.

This concluded the evidence of the witness.

ALEXANDER BRIENS, of Montreal, Foreman in charge of Cattle shipped from Canada to England, gave the following evidence:—

By Mr. Greenshields :

Q. Mr. Briens, you have been a cattle foreman for some time?—A. Yes; I have been at the business since 1879.

Q. Since that time you have been constantly employed taking charge of cattle on the voyage across the Atlantic?—A. Yes; I have been at that business every year, sometimes in winter and sometimes in summer. I run from Portland, Boston and Baltimore in the winter, and from Montreal in the summer months.

Q. In what lines have you crossed the Atlantic in charge of cattle?—A. I have crossed on all lines—the Beaver, the Allan, the Dominion, Reford's Line, and tramps.

Q. State to the Commission how the cattle are treated on board ship?—A. Well, the cattle are treated on the steamer just as well as they would be treated in the farmer's stable. They have an opportunity to lie down and get up again. I have seen the whole side of a ship in which you might see half the cattle standing up and the others lying down, and then the animals standing up would lie down and some others would get up. Of course, when feeding time comes around they get up to take their food.

Q. You have never seen them on board ship arranged heads and tails?—A. Not on any ship leaving Montreal. I have seen them loaded heads and tails in Dublin, Ireland, three or four weeks ago. I went to Dublin when I was over on the last voyage, and I saw them putting them on board ship there heads and tails for England?

Q. But you never saw them loaded in this style on any vessel in this port?—A. No, sir; it is out of the question to load them that way. It is impossible.

Q. How many times a day were the cattle fed?—A. Fat cattle were fed on grain twice a day, hay twice and water twice. They got all they required to eat, without surfeiting them.

Q. The cattle are fed on board ship the same as in the stable?—A. Yes; precisely the same.

By Mr. Smith:

Q. Do you give them plenty of food on board ship?—A. Yes; we give them all they want to eat. We know from experience how much they should eat. We do not give them more grain than they need, but we give them a plentiful supply of hay.

Q. Do you give them plenty of water?—A. Yes. On the Allan ships we were short of water all the time.

By Mr. Smith:

Q. That is rather an extraordinary thing. How do you account for it?—A. In the first place, nobody looks after the putting of casks on the steamer. I will give you an instance of this. On the last trip I went on "the Sarmatian", and there were not enough casks put on the ship for the number of cattle on board, and some casks would not hold water at all. The officers of the ship agreed to give us a little more water in the morning, but they gave us boiling hot water, which the cattle could not use. Instead of giving us cold water in the mornings we got hot water.

Q. Have you ever reported this to the Allan office?—A. I believe Mr. Coughlin's foreman reported this.

Q. You never reported it yourself?—A. I did not report it in the steamship office. I reported it in years gone by, but I gave up reporting it.

Q. Have the Allan Line not got condensers on board their steamers?—A. They have, but when they carry three decks of cattle it is difficult to get enough water. I have always found difficulty in getting what you might call a good supply of water, on the Allan Line steamers particularly.

By Mr. Greenshields:

Q. Is there any cruelty to cattle on board ship?—A. None whatever.

Q. The foremen look after their assistants, who see that the cattle are fed and properly attended to?—A. Yes; we shake the bedding under them every morning.

Q. You do not clean out the stalls?—A. At the top deck, where we can get at them, we clean them out from one end to the other and bed them fresh, because there is a great object in keeping cattle comfortable and keeping them dry.

Q. Where do the foremen sleep on board the ship?—A. Well, there is generally a room for the foremen, and in some ships it is better than others, but in some of the rooms it is not very comfortable. The iron sweats from the breath of the cattle, and the salt and cool air, and the bed is generally wet. You have to take your bed out every day and dry it on the "fiddling" over the boilers.

Q. Or you have to sleep in this wet place at night?—A. Yes.

Q. How about the men? Do they have a dry place to sleep in?—A. They get no place at all to sleep going across. They generally sleep on a bale of hay.

Q. And do they sleep in the alleyways?—A. Yes; sometimes; because it is warmer in cold weather.

Q. In other words, the cattlemen have no place to sleep?—A. Not in the passage from here to England. As a matter of fact, it is the general practice of the steamers that these men have no place to sleep in and that they sleep on the hay.

Q. Has that been represented to the owners?—A. Yes.

Q. And still they do not provide a place for the men to sleep in?—A. It appears not.

Q. Are the cattlemen half as well taken care of as the sailors?—A. No; they are not. The treatment that sailors receive is different altogether from that which the cattlemen receive. There is no comparison whatever.

Q. Where do the cattle men get their food?—A. They generally get it in what is called a "kid", and they go to the galley and get potatoes and meat, and so forth,

in it. When the man gets the stuff from the galley they sit on the hatch, or in cold weather they eat it in some warmer place in the alleyway.

Q. What is a "kid"?—It is a round basin, made out of tin, with a handle on each end.

Q. And they all sit down and eat out of that "kid"?—A. Yes.

Q. Is all the food mixed up in that?—A. They make a mixture night and morning that generally goes by the name of "scouse"; that is composed of potatoes and water and sometimes a little meat, but most times you cannot find the meat. There is supposed to be meat in it, but very often I heard complaints that the men could not find any.

Q. Where did you say they ate this "scouse"?—A. If it is fine weather they eat it on the hatches, and if it is cold they have to go to some warmer place.

Q. There are no plates supplied them?—A. On some ships they give them a plate and a knife and fork, but on most ships they do not get anything of that kind.

Q. How were the men treated on the "Sarmatian"?—A. The men complained all the time about being hungry, and the chief steward refused to give them any more food. I asked the Purser if he could not use his influence to get them something to eat, but it was of no avail.

Q. Is there any regulation by which the men are to be given a certain amount of food, or is that entirely in the discretion of the cook?—A. It is entirely left in the discretion of the cook.

Q. So that, if a man can buy over the cook he might get something better?—A. If the crowd impresses him any way favourably they get better treatment, but if the gang do not impress him favourably they do not get very much.

Q. I suppose an English shilling would make an impression upon him?—A. Yes; there is a good deal of that going on, too.

Q. Is there any regulation by which the men are allowed a certain quantity of food?—A. No; sometimes they get all the bread they can eat, and sometimes they do not get half enough. On the "Sarmatian" they had potatoes only once or twice.

Q. What kind of meat did they get?—A. Sometimes fresh meat and sometimes salt, but you must remember that the "Sarmatian" is a great deal better than some other steamers.

Q. What other steamers do you refer to?—A. Any of Reford's boats, or the Donaldson Line, for instance.

Q. Have you crossed in them?—A. Yes; I have.

Q. Did you cross in any of them this summer?—A. I did not cross in any of them this summer, but I did last summer.

Q. What was your experience then?—A. On those boats they do not give any knives or forks, or anything in that line. They have nothing to drink their coffee out of. The favourites around the galley would get an empty tin meat can and they would drink out of that; and they would pass this can around from one to the other.

Q. What did they carry their food in?—A. They brought it along in the same pail as they used for watering the cattle.

Q. But they would have to take it out of the pail the best way they could?—A. If they could get hold of a preserved meat can they could use that. They were lucky if they got that.

Q. What was contained in that can? Was it scouse?—A. In the mornings, on the Donaldson Line, they got scouse.

Q. Did they get nothing else?—A. Yes; they got biscuit or hard-tack, and oleomargarine, or whatever you call it. It is supposed to be butter, but is only a substitute for butter. They got that supplied them for the next day at 4 o'clock the previous afternoon. At dinner time they got salt beef or salt horse, and potatoes and soup. At night they got tea, and nothing else.

Q. And bread, I suppose?—A. Oh, no; not on the Donaldson Line; they got hard biscuit there.

Q. Was that served to them all mixed up in a pail?—A. In the morning they had nothing else except the “scouse” and some coffee, which they carried in another pail.

Q. And I suppose that was all they expected?—A. They did not expect anything else.

Q. What meal did they get at noon?—A. Salt beef or potatoes, and salt pork.

Q. How was that food carried to them?—A. In a pail.

Q. And they got no knives nor forks?—A. Nothing of that kind.

Q. I suppose they had to eat it with their hands?—A. Some of them were lucky enough to have pocket knives.

Q. But they did not carry pocket forks?—A. That is a luxury they did not know anything about.

Q. What do they get at supper time?—A. They would get this preserved meat can and pass the stuff around according as they wanted to drink out of it. They got tea.

Q. Did they get any sugar?—A. The sugar and everything else is supposed to be mixed up in the tea.

Q. And that was all the supper consisted of?—A. Yes. When they seved out this quantity of butter at 4 o'clock in the afternoon that was supposed to do them until the next day at 4 o'clock.

Q. Where did they keep that butter during the day and night?—A. That is a question I cannot answer you; I do not know where they put it. They generally hid it, and I very often saw the gang keeping it in all parts of the steamer.

Q. There was no particular place to store it, as a matter of fact?—A. None whatever.

By Mr. Smith :

Q. Did the men complain to you about this treatement?—A. Yes; they often complained about the food, and I had to eat hard biscuit myself on board the steamer I refer to.

Q. Where did the foremen eat their food?—A. There was a mess-room for us in alleyway under the bridge on the top deck.

Q. That is on the Dominion Line?—A. Yes.

Q. What have you to say about the Beaver Line, the Dominion Line and the Allan Line?—A. The only difference between the Dominion Line and the Allan Line is that they give no scouse at night on the Beaver Line.

Q. What about the treatment the men receive on the Hansa Line?—A. I have never crossed on the Hansa Line, but from all accounts I hear it is superior to many other lines.

Q. What have you to say about the treatment on the Ross Line?—A. I never crossed in any of their boats.

Q. And how are the men treated on the Donaldson Line?—A. Much the same as on the Dominion Line, and, if anything, worse.

Q. How are the men treated on board these transient steamers?—A. On some of the tramps the men fare better than they do on some of the regular liners, although on the tramps they have neither beds nor blankets, nor anything of that sort. They do not feel that so much going over, because they can sleep in the hay.

Q. And how do they fare on the journey coming from England to Canada?—A. When they are coming back they are returned empties.

Q. Where do the men get their food when they are on the return voyage?—A. Anywhere they can, on the forward part of the deck. For instance, on some of the old ships the forward part of the deck will leak, and they erect the rooms for the cattle men there, because they cannot erect them there for the steerage passengers.

Q. Do they eat their food in that room?—A. Yes; sometimes, but sometimes it is so cold that the men suffer terribly.

Q. Have they any bedding?—A. No. I have just come back from the old country two nights ago on the Allan Line steamer “Hibernian,” and the men suffered

terribly from the cold. The place they slept in was wet, the port holes all leaked and they suffered with cold the whole time. The last two days before we got into Halifax they went to the steward in a body and he gave them an extra blanket.

Q. I suppose the sailors have got a good warm house?—A. Oh, yes; they are in the forecabin, and everything is comfortable for them.

Q. Would it be any improvement in the condition of the cattle men if they were treated the same as the sailors?—A. Indeed it would. They would be treated then as men.

Q. Did you ever speak to the captain and try to get better accommodation for the men?—A. I went very often to the captain, but he generally refers me to the chief steward.

Q. So that your evidence is, that the cattle are much better taken care of and are better treated, and are made more comfortable in every way, than the cattle men?—A. Yes; the cattle are far better treated. It is our great aim, when we get the cattle on board, to make them as comfortable and take them over in as good condition as possible.

Q. Do you think cattle are quite comfortable on the upper deck in November?—A. Yes; but they would be more comfortable if they had stronger fittings on the deck. With strong fittings I think they would be very comfortable; sometimes a sea will wash on board, and of course the cattle will get wet. I have crossed on vessels with fixtures made of 2-inch planking and iron bolts, and the cattle were just as comfortable as they were down below; in fact they were more comfortable than down below, because there was better ventilation.

Q. I suppose you had more sympathy for the cattle than for the cattle men?—A. Oh, no; I had more sympathy for the men, but I could not exercise my sympathy on them.

Q. Do you find your business as foreman in charge of these cattle profitable?—A. I have tried to make a respectable living out of it.

Q. You think the upper deck is perfectly good for carrying cattle if it were properly fitted?—A. I am sure it is.

Q. Have you been in vessels that carried steam fans?—A. Oh, yes.

Q. And do you recommend them?—A. I do not think any ship is properly fitted up for carrying cattle unless she carries steam fans.

Q. Do you find any difficulty during a storm in going down amongst the cattle in the dark, or when you are only supplied with a hand lantern? Do you think the electric light would be an improvement on cattle ships?—A. There is no doubt it would be an improvement but, at the same time, if you want to light a particular part of the ship at night I do not think it would suit so well. There are dark places in the steamers, where you require to have a special light all the time.

Q. Did the cattle ever break loose during a storm at night?—A. Yes; but I saw the men go in amongst them and try to get them back again.

Q. Do you select your own cattle assistants?—A. Yes; generally.

Q. Did you ever see any doctors, or parsons, or lawyers, or members of Parliament, apply for the position of cattle attendants on board of steamers, because it has been stated that all these professional gentlemen did so apply?—A. I never came across any of them looking for that job. I have met mechanics and farmers' sons looking for employment in that line.

Q. Would you take a man as assistant who had not been at sea, and who was liable to be sea-sick, and consequently of no service?—A. If a man wanted to get a free passage home, and I saw he was anxious to get home, I would try to get a free pass for him.

Q. Do you make any enquiry when you are selecting your cattle men?—A. I know most of the men that are in the business.

Q. Would you employ a green hand that had never been at sea before to look after the cattle?—A. I would not. I generally have enough experienced men to look after the cattle, but sometimes I might take on an additional hand.

Q. Would a man go a second time as a cattle man after having gone through the experience that you describe?—A. He would if he could, get nothing else to do.

Q. What would you do if you found a man on board who refused to do his work and could not get out of his bunk?—A. I would try to persuade him.

Q. You have no control over him, and you could only try and persuade him?—A. And suppose the captain of the ship had control over him, that is about all he could do, either.

Q. No; the captain could make him work?—A. I could try to get the man to work if he was able to do so, but I have never seen a man that would not work if he could.

Q. The men must like the business, then, if they continue in it?—A. Some of them are in it a good while, and I suppose they are looking for promotion to be foremen.

Q. Did you ever act as a cattle man yourself?—Yes, sir.

Q. So you know the business thoroughly?—A. Yes; but the men were better treated on most of the ships until a few years ago.

Q. So their treatment on board ship is getting worse?—A. It is getting worse for the last two years.

Q. And do you say that you find the treatment of the men worse on the Reford Lines than on any other?—A. Yes; it is worse than on the regular liners or the tramps.

Q. Do you not think that could be remedied by the cattle exporter making an agreement as to the treatment the men should receive when he is making his contract with the ship?—A. I do not think that would remedy it very much, because there seems to be a prejudice against the cattlemen as a class, and I do not think they will ever get what they are entitled to.

Q. Do the sailors not wish to associate with the cattlemen on board ship?—A. No, sir. They are looked upon as something that is not human.

Q. Do you think, if the cattle assistants signed the articles of the ship, it would give them more status of respectability?—A. I think it would make them worse. I think, if the officers of a steamer got a little authority over the cattlemen, they would use it with a great deal more severity than they ought to; and I think that if the officers of the ship had any more power than they have now over them, these men would be driven out of the business altogether.

Q. Do you think the officers of the ship would punish the men?—A. I believe they would find a hundred-and-one ways of making their lives miserable.

Q. But from your evidence it would look as if they could not be any more miserable than they are now?—A. Oh, yes, they could. A person is never so badly off that he cannot be worse. The men can do their work now, but if the officers of the ship had the ordering of them around and the supervision of their work they could make it very hard for them. After they were done watering the cattle they might order them to sweep out the alleyways and other parts of the ship.

Q. You think it would be no improvement if the cattlemen were to sign the articles of the ship?—A. I think it would be no improvement, and in fact I am sure it would not.

Q. If they were on the articles of the ship they would be entitled to as good treatment as the sailors?—A. If that would give it to them it would be all right.

Q. The captains would be punished under law if they did not give them their rights?—A. But it would be very hard to bring the captain to account. As an illustration, I may point out that there are some steamers that carry their cattle to Liverpool, and after they land their live stock they go around to Glasgow. If these men were on the ship's articles they would have to go to Glasgow with them, and they could not stop at Liverpool to get their money or to take the next ship back. They might send them on one of the same company's steamers from Liverpool.

Q. Is there any objection for the same vessel to bring the cattlemen back?—A. The only objection is, that the men have to pay their own expenses while they

are in Liverpool, and if they are delayed there for eighteen or twenty days it is a serious loss to them.

Q. So that the men in returning want to take any vessel they can get?—Yes; they wish to take the first steamer they can get. One of the greatest grievances they have is to have them delayed in Liverpool, where they lose their time. I was over there last summer on a steamer, and the day we arrived there a steamer of the same line was returning, but they would not send the men back on that steamer. They kept them in Liverpool eight or nine days waiting for another steamer. The company could as well have sent them back by the first steamer.

Q. Would the cattlemen be treated on the return voyage as well as the steerage passengers?—A. Not at all. They are not allowed to associate even with the steerage passengers. If they were caught in the steerage they would be put in irons and locked up.

Q. Do you think that if these men were better treated you would get a better class of men to look after the cattle?—A. I have no doubt about that.

This concluded the evidence of the witness.

Honorable MATTHEW H. COCHRANE, Senator for the Dominion of Canada, gave the following evidence:—

By Mr. Smith:

Q. You have some experience and knowledge of this cattle trade, I understand, Senator?—A. I have some experience in it, Mr. Smith.

Q. You have gone over on the vessels with cattle, have you?—A. I have been over with thoroughbred stock, and have had a good many cattle of that kind. I think my first shipment was in 1868, and I continued for some time bringing cattle from England to Canada—up to 1876. I have shipped quite a number of beef cattle, but I never crossed with them personally.

Q. When you crossed with your own cattle I suppose you saw that they were well cared for?—A. Yes.

Q. Have you sent many beef cattle from Canada to England?—A. I shipped 954 cattle from here last Fall. They were ranche cattle, which came from my ranche in the North-West.

Q. At what time of the year were they shipped?—A. They were all shipped in one week—in October. I cannot give you the dates exactly.

Q. Were they shipped by the regular liners?—A. Yes; one cargo was shipped on the Allan Line, and another on the Dominion Line.

Q. How did these animals get across?—A. The first lot had a very fine passage and were landed in fine condition.

Q. There was no damage to them?—A. No; but I think there were two or three lost.

Q. How were these animals lost, do you know?—A. I cannot tell you. My son is present in the room, and you can examine him. He crossed with the cattle, and he will give you all particulars as to how they were taken care of.

Q. How did the second shipment of your cattle fare?—A. They were shipped on the "Knight Companion." She is an outside vessel, but she was chartered by the Dominion Line.

Q. How did the cattle get along on board of her?—A. Not so very well.

Q. Had the captain any experience in the cattle carrying-business?—A. I don't know that. I know that he was very much against handling cattle or having them on his ship. He told a friend of mine that his ship was not suitable for the trade, but it was too late when I knew that, for my cattle were all on board.

Q. Did you loose any cattle on the "Knight Companion"?—A. Yes.

Q. How many?—A. Twenty-two.

Q. Did the company insure them?—A. Yes.

Q. So you had no loss?—A. No; not any loss further than was not covered by insurance.

Q. To what do you attribute the loss of the twenty-two head of cattle on the "Knight Companion"?—A. I attribute it to stress of weather and to a very rough passage.

Q. Were they washed away, or drowned, or killed?—A. No; I think they were bruised.

Q. Did the animals have to be killed when they were maimed?—A. It was not necessary to kill them, as they died themselves, I suppose.

Q. Do you think that if that shipment of cattle had been made on one of the regulars liners they would have been all right?—A. Well, from what I can learn, if they had as a good treatment as my cattle had on the "Corean," and as good a crew and as good attendance, I do not believe there would have been nearly the same loss. They were the same class of cattle on the "Knight Companion" as on the "Corean," only they were a little heavier.

Q. Would you ship any more of your cattle on a tramp or transient steamer?—A. I will change my mind very much from what it is now if I do.

Q. So you think it is worth the difference to pay a little more and have your cattle shipped on board the regular liners?—A. We had to pay as much on the "Knight Companion" as we had on the regular line of steamers. I shipped the previous year on the Dominion Line, and had very good luck.

Q. You have no practical suggestion to offer as to the shipping of cattle on the upper deck or as to any improvements to be made in the trade generally?—A. That is out of my line, as I have not had experience enough to judge that. I would say that from my experience in importing thoroughbred cattle, with proper care I think cattle will gain on the passage instead of losing. I have crossed, I think, eight times myself with cattle, and I remember one time on board the "North America" I had animals on board which cost \$60,000 in England, and I had so much faith in the handling of the cattle and their treatment on board ship that I never took a dollar insurance on the risk. I never insured any of the thoroughbreds I brought over. Of course, rates at that time for cattle of that kind would be 7 or 8 per cent., and on an animal for which you pay 1,000 guineas the insurance would have amounted to a good deal of money.

Q. Have you any suggestion to offer as to the time of the year at which cattle should shipped?—A. I have had no experience of shipping in the winter, and I do not think I would ship them in that season. I think there might be great improvements in carrying on this trade and I have been very much interested in this discussion.

Q. Do you think there are improvements required?—A. I think there is a great improvement required in the class of men that take charge of cattle. Of course, we all understand that the foremen are generally good men. He gets a certain sum per head from me or from anybody else who ships, for taking care of the cattle. If there is a large lot of cattle shipped he gets 50 cents a head and furnishes his own men. If the lot is a small one he gets 75 cents a head. I have seen men that applied to get on the ship on which I shipped some of my own cattle, and I think they were not at all fit for the business. In my opinion they would be utterly useless on board ship. I think that it is at least important that some mode should be adopted whereby we shippers of cattle could ensure that we are getting experienced men to attend to our cattle. Let us pay for it if necessary. We should have men that are accustomed to the sea and able to work when there is rough weather, and who know a little something about cattle. We also should be able to employ sober men, and not be altogether in the hands of a certain class of persons who follow this business. You may have a very good foreman, but he is human, like everybody else and tries to make money out of the business. He may take up a man to whom he has promised to give \$5 if he does his work well, and if the man is good for nothing, perhaps he does not get anything at all when he gets to the other side. The men should be supplied with good food on board ship,

and from what I have heard this afternoon their accommodation is nothing extra. I think there might be a great improvement made in this direction.

Q. How do you think this improvement should be carried out?—A. I don't know that. There are wiser heads than mine, which can devise some means. As I said before, the first lot of cattle we shipped went over all right, and my son told me that he had very good men in charge. Whether it would make any difference in the way they attended to the cattle because of his being present or not I don't know, but at all events the second vessel, which sailed two days later, landed our cattle in a very different shape. There was so much difference in the condition of the cattle that I think it made a difference of \$4,000 or \$5,000 in their sale. One point to which I want to refer to in the most distinct manner is this: I understand that the measure promoted by Mr. Plimsoll contemplates the prohibition of cattle being shipped to England or landed alive there from Canada, or from other countries on this continent. I think if that measure were carried out or adopted it would be one of the most disastrous things that could possibly happen to the Dominion of Canada. I think, although I am not sure of that, that I was one of the very first who shipped a few beef cattle to England. I forget the year now, but at all events I only sent five or six head, as I was sending some thoroughbreds along with them. I have watched the development of the cattle trade with great interest ever since. I am somewhat interested in raising cattle in the North-West, and I believe, old as I am, I shall live to see the day when we can ship two or three hundred thousand head of cattle from the Dominion of Canada, if we have a proper manner of shipment and a proper way of taking care of them. If a man has not been in the great North-West he has no conception of the opportunities there are there for raising stock and making beef. We make as fine beef as there is in the world from animals which we never house, and which never have hay cut for them, or anything else. We can turn out as fine beef on the North-West ranches as you can get from any stall-fed animal in Ontario, or the Eastern Townships, or anywhere else.

Q. Is it as good beef as the English beef?—A. I believe it is. One remark was made here during the inquiry, that our cattle landed in England were killed and sold as the best Scotch beef. I think that is saying a good thing for the Scotchmen, because I believe our beef is as good, if not better, than any in the world.

By Mr. Greenshields, Q.C.:

Q. The passage of this Bill promoted in England by Mr. Plimsoll would entirely kill the cattle industry in the North-West, would it not?—A. Not only that, but it would injure every part of the Dominion of Canada. If we look at the dimensions which this cattle trade has grown to we will find that the cattle export trade is one of the largest amongst the exports of the Dominion of Canada. I do not know any other export trade which is as large as it is. When you come to the point of sending our beef over as dead meat, I may say that it would not be an impossibility to do so, but we would not average one-half of what we get for the live cattle now. It is well known that this dressed beef which is sent to England is very good so long as it remains in the cold rooms in which they send it over, but the moment it comes into the open air it has a washed-out appearance. It absorbs the moisture in the chamber and it goes through it when it is exposed to the open air. It has lost that nice appearance which fresh-killed beef has, and it sells at a far less price than the fresh-killed meat. The English people will never buy it unless the necessity arises for their procuring very cheap meat.

This concluded the evidence of the witness.

MR. PLIMSOLL'S ADDRESS.

Mr. SAMUEL PLIMSOLL, of London, England, addressed the Enquiry. He said:—
Mr. COMMISSIONER SMITH AND GENTLEMEN:—I thank you very much for giving me an opportunity to say a few words to this meeting before I leave the city of Mon-

treal. I had prepared this morning what I wanted to say this afternoon, but I might say that my views on this subject have been modified by the evidence given before the Commission to-day. (Applause.) I would rather that you would wait to hear my full statement, because you may find that you applauded something you did not intend to applaud. The evidence of the young man who gave his deposition before Senator Cochrane struck me very forcibly, and I think it must be evident to the minds of you all that great good has come out of this investigation. Whether this good reaches the sailors, as I hope it will eventually, or whether it merely betters the condition of those unfortunate men who take the cattle across the Atlantic, and whose lot has been described to us so well by that young man to whom I have referred, is all the same to me, if good come of this inquiry. I shall be very thankful indeed if the working classes, or any section of them are benefited by the result of this investigation. Now I will just review the evidence given in my hearing during the week, and I shall do it briefly. One witness said that he should not take up your time to notice my sensational statements. I observed that he did not say inaccurate, and this was wise, as all the statements made on my authority are true and capable of proof. When I have quoted, I have been particular to give my authority, as the letters of the 8th and 9th November to a London newspaper, show. Witness after witness has been called to contradict some of the statements in those letters as to the treatment of cattle on board ship. I may say that the evidence has had considerable effect upon me. May I suggest that if cattle attendants had given this contradiction it might possibly have been deemed more conclusive than the evidence of those who never see the cattle after they leave the port. In that connection, in relation to some little animosity expressed towards me here and there, I observe that if whatever cruelty may have occurred to the cattle on board ship is not known to the people of Montreal they cannot be held responsible as to what happens to the cattle after the steamers are gone away from this port with their cargoes. I mention that so that gentlemen unduly angry on the subject may give thought to it. Other witnesses have insisted that any interference with the trade would be unpopular, especially amongst the farmers. Now, if one or two farmers had been called to say this, perhaps that statement would have more weight. Several witnesses have denounced the weakness of the sheds erected upon the deck for the cattle as paste boards, &c., and have urged that the frames should be of angle-iron and the sides and roofs of 2-inch planking. They should, they said, be made "part of the ship." Have you considered that, gentlemen? If they were strong enough to withstand the force of the billows, which now occasionally sweep them, the cattle, and the men overboard, then the ship itself would go over and probably founder. The fragility of these structures is the safety of the ship. Neither shedding nor cattle should be placed upon the top deck of a ship, whether called spar deck, awning deck or hurricane deck. The top deck is for the sailors to work the vessel from, not the frail roof of a cattle shed, which, in one case was so completely washed away that the portion of the crew aft could not go forward, nor the portion of the crew forward go aft for three whole days, and had not the gale moderated the vessel would have been lost. It will be admitted that the roof of a cattle shed is a very different thing to a deck for the sailors, yet I have not heard from any witnesses the most remote reference to the safety of the sailors. I will not waste your time in comment upon this, but will leave that to a more suitable occasion. Some people who have spoken to me assume that the reason why Canadian cattle are admitted into England whilst other cattle are excluded is because Canada is a British colony, because Canada is loyal. I do not wish to be disagreeable, but I think it is simply because Canadian cattle are, or are supposed to be, free from contagious disease—nothing else. The safety of our English herds is the thing considered. A gentleman whose name is Bickerdike talked about Independence, or Annexation to the States being the result of any legislation distasteful to himself and his friends, the cattle exporters. Well, I think that they are not Canada; they are not Montreal; they are not even a large part of Montreal, but they are a very small part of it; for nothing has more surprised me than the almost unanimous feeling of the people of

this city and country that the time has come when the abuses and the avoidable cruelty that at present attach to this trade should be put an end to. I am glad unnecessary or premeditated cruelty is not the case, but avoidable cruelty in the sense that it is inflicted upon animals as resulting from a certain condition of things. As to Annexation: as the cattle of the States are now scheduled in England it is difficult to see where the good of that would come in; and as to Independence: I think when the time comes that Canada, feeling herself strong enough to go alone, shall, after full consideration, desire to sever her connection with the old country, no political party in England will say her nay. Meantime, I decline, for one, to accept the mouthings of Mr. Bickerdike as the voice of Canada.

A cattle exporter.—Hear, hear.

MR. PLIMSOLL.—I hope he is here, and so far from influencing the people of England, they will not condescend even to laugh at him. I shall read you a letter which I received the other day from a large export of cattle in this country. It is as follows:

TORONTO, 2nd January, 1891.

SAML. PLIMSOLL, M.P., Montreal.

“DEAR SIR,—Being largely interested in the export of live cattle from Canada to England, and not being able to be present at the enquiry on Monday next at Montreal, I thought I would write you on the subject, giving you facts which can be substantiated by scores of the principal men in the trade.

“I am satisfied that the exportation of live cattle can be carried on with perfect safety and without any cruelty, if the proper space is allowed the animals which is 8 feet long by 2 feet 8 inches wide. I proved this by accompanying a shipment myself and landed the cattle without bruises or soreness. For the months from May to September the trade can be carried on as safely as if the cattle were in their own stables and with as little cruelty.

“I will now endeavour to show you where the cruelty and difficulties come in of late years. It used to be that the exporter could take his space from the agents of the ship company, 8 feet by 2 feet 8 inches he could and did insist on getting full space; then all went right; the cattle landed in good condition and sold for full prices, but things have changed for the worse both for the cattle and the exporters. The agents let their steamers to men who are not exporters, in many cases at high rates of freight, with the understanding that they may put in all the extra cattle they can. This freight is farmed out to exporters in Ontario and by the aid of the inspectors, who should see that the cattle have the room required by the Government regulations, seem to ignore all rule. The cattle are packed like herrings in a barrel. I have known cases where agents charged freight for one-half the extra cattle crowded on board. Until these proceedings are stopped there will be no safety or profit to the exporters and it is a cause of great cruelty and shrinkage to the cattle. The cattle are loaded on the steamers in Montreal while they are taking on other cargo, for instance, grain. The poor beasts standing in the dust and smoke for hours before sailing and the hot sun pouring down on them, and very often at the last moment fifty or sixty head of cattle are rushed on board, heads and tails, and the steamer sails probably with not half enough stalls to store the cattle in. I have known most of the cattle on the steamer not getting feed or water for twenty-four hours after being loaded, caused by the alleyways being blocked up by loose cattle and fodder. This custom should be done away with and no ship should be allowed to receive her cattle until all other cargo is stored away and the apartments where the cattle are to be stored cleared of lumber, coal and other garbage. All fodder is supposed to be under cover, and it is very important that it should be. Instead of this a large quantity is piled on top of the cattle pens on the spar deck, and in many cases causing the pens to break down and wound the cattle terribly, and a lot of it is carried overboard with the pens. Should the weather be wet, as often happens, the fodder is wet through, and in a few days is unfit for food. On the other hand, should the weather be dry, all goes well till the ship reaches the

sea; then the fodder gets wet with salt water and is at once unfit for food. This is both cruel and detrimental to the shippers and profit to the ship's company.

"One more important part of the trade is comfortable berths and wholesome food for the men in charge, in many cases they suffer more than the cattle. I admit that the general class of the men is bad but a good clean decent man will not put up with the treatment they receive from the officers of many of the lines engaged in the trade. I would suggest that the ship companies hire and control the men and be responsible for the landing of the cattle in good condition, and the inspector made to enforce the regulations and see that the cattle get full space.

"As to the loading of steamers on three decks, I have had some dear experience. In my opinion there is no steamer fit to carry cattle on three decks in the hot weather. The cattle on the main or middle decks, if landed alive, in most cases shrink in value more than the freight, and from the 1st of September until the close of navigation no cattle should be allowed to be carried on the spar deck of any ship, that has not got iron covers, and in winter it should be prohibited altogether. It is cruel, and it is a loss to the exporter and a gain to the ship companies at the expense of the exporter. I am not opposed to the export of live cattle. I simply put these statements before you in hopes that through your influence your Government will remedy the existing evils.

"I repeat that what I say can be proven by the exporters of Ontario who export at least 80 per cent. of the cattle.

"Hoping that you may see some points in this that will benefit the trade, I remain,

"Yours respectfully,

"A. J. THOMPSON."

That letter I received the day before yesterday. It seemed to me to be very important, and I thought I would take the liberty of reading it. I hope this letter will bring good to somebody. I am quite sure that if it only betters the deplorable condition in which the cattle are described to be I shall be thankful for my part.

Mr. GREENSHIELDS.—On behalf of the cattle exporters here, I wish to ask you one or two questions, if you have no objection, with regard to some of the statements which are contained in this book published by you.

Mr. PLIMSOLL.—I do object. I am not here on my defence, I am a visitor.

Mr. JOSEPH XAVIER PERREAULT.—I do hope Mr. Plimsoll will not go out of Montreal without justifying in some way the extreme assertions made in his book.

Mr. PLIMSOLL.—Where I quote in the book I give my authority, I have not come to answer to you; I answer to the people of England.

Mr. PERREAULT.—The people of England have no right to come here and throw dust in the eyes of the people of Canada. I think that when Mr. Plimsoll writes a book like that he should come here and take the responsibility of what he quotes. I appeal to the cattle exporters of Canada who are here, to know if they will stand the accusations which have been flung all over the world as to how we are doing business in Canada. Mr. Plimsoll should say here, after the complete inquiry which has taken place, that he must acknowledge his statements respecting cruelties said to have been exercised on cattle did not apply to the cattle shipped from Montreal. It is only fair for him to say that he has been imposed upon by the parties who have written these letters in England, and to say that the cattle from this port have been treated very well. What is the good of this inquiry if Mr. Plimsoll is to go to Ontario without his convictions shaken by all the testimony which has been given here? This is not what we call British fair play in Canada, and I further say that Canadians are not accustomed to be bullied by any body, even if they come from either this side of the Atlantic or the other. He should have admitted he was wrong when some of the best men in Canada have gone to the trouble to come here to prove that he was wrong. When a gentleman comes here with such awful statements as appear in this pamphlet, and which have been sent all over the world, the least he can do in honour is to apologize to the people of Canada when they have been refuted by

the evidence given here. I wish the man to stand up who can say Mr. Plimsoll is justified in the assertions he has made against the cattle-dealers of Canada. If there is a man here who has been listening for two days to the evidence, I want him, if he thinks so, to stand up by the side of Mr. Plimsoll and say he has been supported in his statements.

MR. G. F. FRANKLAND.—Mr. Plimsoll has made no accusation against Canada or Canadian cattle, and I consider your language is perfectly uncalled for.

MR. PERRAULT.—I consider that my language is justified. I am a citizen of Montreal, who has taken great interest in her trade, and I would not be doing my duty if I did not stand up for the commercial interests of my country. I do hope Mr. Plimsoll will answer before the inquiry what questions may be put him, as a fair man would do. If he will not answer, I will say he is not sound in his accusations, for if he were fair he would answer any questions put to him, so that the people would see he was fair. So far, the inquiry has proven that these extreme statements have not been verified. We have established that the cattle trade of Canada is now carried on in a proper way, although there are some difficulties which a new trade must encounter; but these matters are being improved every day, and there is no need to shut Canada out from the markets of England. As Senator Cochrane has said, if this Bill were adopted it would be most disastrous indeed to Canada. I hope that when Mr. Plimsoll goes to Ontario he will know that he is not supported in his accusations here, and so far the inquiry has shown that every one of his extreme statements have not been verified. It has been shown, on the contrary, that the cattle trade of Canada has been carried on in a humane and proper manner.

MR. PLIMSOLL.—Mr. Commissioner, the statements I have made on my own authority are true, and can be proved. Other statements are in the book, which are quotations from newspapers and are given as such; the names of the papers are given and the dates are given. I cannot see the necessity to be called upon to explain these statements, because they are not my statements, and whether true or false they do not apply, as that irate gentleman indicates, to the trade of Canada. They describe the treatment of a cargo of cattle from the United States, if my memory is correct. I decline to answer that gentleman's intemperate speech.

MR. FRANKLAND.—Mr. Commissioner, as a member of the Dominion Live Stock Association, I desire to tender you thanks for your courtesy, your kindness and your patience in listening to the evidence which our parental Government of the Dominion has sought for in regard to this great industry. I have also to express my approbation at the presence of Mr. Plimsoll, one of the greatest philanthropists of the day. As an alderman of the city of Toronto I wrote an open letter to our mayor calling attention to the fact that Mr. Plimsoll was in Canada, and moved a resolution that he should be invited as a guest of the city, in order that our citizens might come in contact with him. I am under the impression, Mr. Commissioner, that Mr. Plimsoll is not here as an enemy of Canada, and it is a pleasure for me to feel as I do that many of the statements which have been quoted in that book which has been referred to have been written intemperately, and that some more thought and time might have been given to the contents of that book before it was thrown wide-cast to the public. Knowing, as we do, the great work which Mr. Plimsoll has done, and knowing the great work that men of his calibre have done in other ages, I am pleased to think that through this investigation much good may be done to the cattle trade generally. I can understand that a man holding the responsible position which the last gentleman does in the city of Montreal, (Mr. Perrault), feels warmly upon anything that might reflect upon the shipping trade of this port. At the same time, it must be gratifying to all the cattle exporters and to all who desire to see the development of this great agricultural country, the greatest appendage of Great Britain, to know that this inquiry has taken place, and that some evils will be remedied by it. My friend, Mr. Bickerdike, spoke rather intemperately of the desire for Annexation. I hope it will never come to that. It would be the greatest calamity to the English-speaking race, which has been rocked in the cradle of our grand

constitutional mother country. If that should come to pass, and we should go amongst a nation of low-bred foreigners—

Several MEMBERS.—Oh, oh.

Mr. FRANKLAND.—I may say that I believe no discussion as to politics should come in to this question at all. The day has come when Canada is not dependent upon any foreign nation for sympathy in anguish or tribulation. There is no appendage of the British Crown that stands so pre-eminently great as the Dominion of Canada, which was one of the first countries to send her productions to the mother country, in the way of animal food. I certainly regret that the American nation is so averse to all that concerns Great Britain that they should debar our country from certain privileges which we had in trade relations with them, but I am quite sure that Canada and Great Britain can stand alone without them. I do not care how much they strive in the United States to keep out contagious diseases from their cattle, they cannot succeed. Knowing so much as I do about the development of disease amongst cattle, and knowing their carelessness about the prevention of it, I know that they will never keep their animals free from disease, as we do in Canada. Mr. Plimsoll has come to Canada, and he knows something of Canada, for he has been here before. He is the seamen's friend, and it is a grand thing for any man to stand up distinct from the people to speak kindly and assist in the general welfare of any class or classes of workmen. I have been on the Atlantic every month in the year from January to December, on board ships which carried live cattle across to England. I never put cattle on a ship while I was afraid to go on myself, and I may say that there are no lines of steamers in the world which give as good a service as the lines running to the port of Montreal. It seems to me that in this cattle trade we should be a strength to Great Britain, and that Great Britain should be a strength to us. If we treat Mr. Plimsoll kindly and do our best to give him evidence in connection with this important matter he will treat us well when he goes back to England. If we hound him while he is amongst us he will leave us, believing that we do not desire to do our work properly. This evidence which our very patient Commissioner has taken during the inquiry will show to the Dominion of Canada and to the Government of the mother country that Canada is doing everything she possibly can do to meet whatever requirements the trade may desire and to insure the delivering of her stock, not only free from contagious disease, but free from the pains, aches and bruises of an ocean voyage. I can believe a lot of the statements that have been made in connection with the American trade. I want Mr. Plimsoll to understand that an Englishman, or an Irishman or a Scotchman coming to the Dominion of Canada comes amongst friends. There is no diversity of nationality here. We are Canadians and Britons. We acknowledge Mr. Plimsoll's greatness and goodness, and we honour him for it, and we hope that when he returns to England he will tell the people, both in Parliament and out of Parliament, that his desire is not to disturb Canada, not to injure her industries, as long as Canadians do their duty.

Mr. J. P. CLEGGHORN, president of the Montreal Board of Trade.—On behalf of the Board of Trade of Montreal, I wish to express thanks to Mr. Plimsoll for coming to Canada and for the extreme patience he has exhibited in the interests of the shipping trade of Canada, because if any good results come from this inquiry Mr. Plimsoll is to be thanked for them. If one or two men are saved hardships when crossing the Atlantic, to this inquiry thanks are due; and if one or two cattle were treated better, thanks were due to Mr. Plimsoll for it. Therefore, he hoped that when leaving Montreal Mr. Plimsoll would not think the citizens were unanimous in finding fault that he had been the means of an opportunity being afforded of views being expressed on the cattle trade of Canada. An export trade which represented ten millions of money a year was of great consideration to Canada. During the past year 153,000 head of cattle had been shipped from the Dominion, and if the trade was to be benefited and improvements made, then thanks were due to Mr. Plimsoll.

Mr. PLIMSOLL.—I thank you very much for your kindly expressions of feeling towards me.

Mr. BICKERDIKE.—I wish to second Mr. Cleghorn's motion. I think, however, instead of thanking Mr. Plimsoll for all this, thanks are largely due to the Government who have appointed this Commission. It is not, perhaps, generally understood that Mr. Plimsoll did not come to Canada with the view of improving the system of shipping cattle; he came for the express purpose of stopping the export live-cattle trade of this country. While, as the president of the Board of Trade says, this inquiry will result in good, we do not owe our thanks to Mr. Plimsoll. Mr. Plimsoll's Bill would entirely do away with the Canadian cattle trade. He introduced that Bill and got a number of members of Parliament to side with him, by circulating a book having extracts in it that Mr. Plimsoll himself admits to-day are not correct. As an Englishman and an honest man I think he should say before he leaves here that he has been misrepresented, that his statements are misrepresentations, and he should at once admit that he is not responsible for any of them, as far as they apply to Canadian cattle. I intend to second the motion of the president of the Board of Trade, although Mr. Plimsoll has attacked me pretty strongly. I said if this trade were stopped, that if England dared to cut off such a trade as this—

Mr. FRANKLAND.—Such a word should not be used.

Mr. BICKERDIKE.—I repeat, if England would dare to cut off such trade from Canada, on statements like those contained in Mr. Plimsoll's book, and leave us in the lurch, without having any place to which to send our cattle, annexation would be preferable. Notwithstanding that, Mr. Plimsoll has brought in a Bill to get such a thing done, and has come for the annihilation and extermination of every cattle shipper and the driving of us out of the business.—Has he or has he not?

Several MEMBERS.—Yes.

Mr. BICKERDIKE.—Instead of giving the whole thanks to Mr. Plimsoll, I think we are bound to thank the Government of Canada, which has gone to this trouble, and if Mr. Cleghorn will couple in his motion thanks to Honorable Mr. Tupper, Minister of Marine, for opening the inquiry, I shall be glad to second it.

Mr. CLEGHORN said that the Commissioner would be quite safe in carrying the thanks of the meeting to the Minister of Marine.

Mr. SMITH.—I shall take care that these sentiments are conveyed to the Minister of Marine.

The inquiry adjourned until the morning of January 8th, 1891.

MONTREAL, January 8th, 1891.

On this 8th day of January, 1891, the inquiry was resumed, Mr. Wm. Smith, Deputy Minister of Marine, presiding.

NATHAN KENNEDY, of the City of Montreal, Exporter of Cattle from Canada to Great Britain, gave the following evidence:—

By Mr. Smith:

Q. Have you any statement which you wish to make relative to the cattle export trade of the Dominion?—A. There have been statements made before this inquiry with which I agree, to a very large extent, and there have been some statements made with which I do not agree. I have been a large exporter of cattle for six or seven years, and I have considerable knowledge of the business, although I am not engaged in it now.

Q. What kind of business do you attend to now?—A. I attend to the stock yard business, and also to arranging for space on board the steamers for cattle going across.

Q. You arrange to procure space for the cattle, do you?—A. I arrange to provide cattle for the ships—that is, when cattle are brought here, I make arrangements to get them as freight for certain ships.

Q. You arrange for the freight of the cattle?—A. I do not arrange for the freight, but I arrange for the space. I arrange for the space for the cattle on the Allan and Dominion Lines, and I can say that I perhaps have shipped more cattle myself than any man in the Dominion of Canada.

Q. Are you out of the business now?—A. Not entirely. I was I believe the first to suggest the stock yard accommodation for the city of Montreal. I invested \$75,000 in stock yards in Montreal, and I do not think there is any other exporter who can say that.

Q. You agree with most of the suggestions that have been made?—A. Yes; I agree with them largely.

Q. With what suggestions do you not agree?—A. I do not agree with all the evidence Mr. Acer has given, I am sorry I differ with him, because he is a man I esteem. I do not agree with Mr. Acer when he says it would not make much difference if cattle were exported alive or in the shape of dressed beef. I claim that we use for local consumption and export 200,000 head of cattle a year in Montreal.

Q. There are 120,000 exported. That would leave only 80,000 for local use?—A. There are nearly 200,000 head of cattle used right in the city of Montreal for consumption and for export from this country. These cattle average us 1,150 lbs. each. If we calculate them by this weight per animal, and if Mr. Plimsoll's Bill passed, in forty-eight hours after it would make a difference of 1 cent per pound on every bullock raised in the Dominion of Canada. That would be a loss of 1 cent per pound on 230,000,000 lbs., and would represent to the Canadian farmers a loss of \$2,300,000.

Q. It is quite clear then that you are not a dressed-beef man?—A. I am not a dressed-beef man by any means, and for several reasons, and that reason I have given is the most important one. Another reason is, that the dressed-beef business has never been a success either here or in the United-States, although the United States have the advantage over us of getting cheaper cattle than we can in Canada. Cattle on the other side are from one cent to $1\frac{1}{2}$ cents a pound cheaper than they are in Canada.

Q. Would that mean on the ranches?—A. No; they are cheaper in the open market. Meat is cheaper in the States than it is here by $1\frac{1}{2}$ cents per pound at least.

By Mr. Acer:

Q. That is only some times?—A. No; at all times.

Q. Five years ago it was cheaper in Canada than in the United States?—A. There has been no time during the last ten years when the average price of meat for any one season was cheaper in Canada than in the United States. It has always averaged $1\frac{1}{2}$ cents a pound more in Canada than in the United States. There have been, of course, times when cattle have been higher in the United States, but I am just giving you the average. I have handled large numbers of cattle in the United States and I know something about it. The reason meat is cheaper in the States than it is over here is that they can afford to feed their cattle cheaper than we can, and consequently they can sell them cheaper.

Q. What is corn worth in that country?—A. Corn is high there to-day. To prove my assertion that feed for cattle is cheaper in the States than it is in Canada I know that they pay in Canada about \$18 or \$20 per head for distillery "slops," whereas in the United States it rarely costs \$10. There is a difference of \$10 a head right here.

By Mr. Smith:

Q. That is, \$10 a head in the price of the food?—A. Yes; in the price of the food for distillery-fed cattle. Now, with regard to the corn-fed cattle in the extreme west of Canada; I may say that I have been all the way from the Rocky Mountains to New York and I know something about it. Notwithstanding that corn is high in the United States to-day there are some places where they cannot get more than 25 or 30 cents a bushel for corn, while in Canada it costs 75 cents. It is so expensive to

send it to market from some parts of the west that they cannot afford to ship it, no matter how high the price is, but they feed it to their cattle.

Q. Did you ever hear of them using corn for fuel?—A. I saw them use it for fuel myself, but only once. It has, however, been done frequently. It costs so much to take it to market and to haul fuel back that it was cheaper to burn it than to sell it and buy fuel in its place. Corn has been as low as 10 cents a bushel, and then you would have to haul it fifteen or twenty miles from some parts of the country to get it to a railway station.

Q. What is the cheapest price at which you have ever seen corn selling in Canada?—A. Fifty cents, I think.

Q. I suppose there is no doubt that the difference in price of corn between here and the United States is very great?—A. Corn will always be higher here, as long as your Government puts a duty on it, and the only advantage we have in the trade is that we are allowed to ship our lean cattle into England alive while they are not allowed to do so in the United States.

Q. You think the people in the United States have the advantage over us in every other way?—A. Yes; and if you deprive us of that advantage in England the cattle business in Canada is no more. The Canadian farmer could compete in no way with the American farmer. You might ask me why they export dressed beef from the United States if it is not a profitable trade, and why they should continue for years exporting dressed beef. They do it as a matter of necessity. There is a trade combination by which only three or four companies in the United States handle all this dressed beef, and every butcher in the United States has to buy his meat from these syndicates. He cannot buy cattle in the country and bring them into town and kill for himself, for if he did that those syndicates would start a store of their own and undersell this man if he did not buy his beef from them. These wealthy corporations have millions of capital, and they can very quickly ruin any man who does not deal with them. In order to keep up this monopoly and to control the whole home trade of the United States, as they do, they have to dispose of the surplus cattle which they buy in the market.

Q. Do they buy all the cattle which comes to the market?—A. They buy every bullock which is sold in the market. They have to do this or break up the monopoly.

Q. Is it because of these syndicates that beef is so much higher in New York than it is here?—A. Certainly, it is the monopoly; and whatever dressed beef they have left over after supplying the home trade they export to England. It is not a speculation, but it is a matter of necessity to ship these cattle out of the country, dead or alive, and they ship them in the form of dressed beef to England. Whilst they have lost hundreds of thousands of dollars in exporting the dead beef, they make it up five times over by controlling the home market.

Q. Do these three or four companies or syndicates agree with one another to monopolise the trade?—A. I presume they must, or otherwise they could not maintain the monopoly. I think they are separate companies, but at all events they do not fight each other; they are immense concerns, and nobody can compete with them. A great many people tried to fight this monopoly, but every one of them had to give up. Now, with regard to Mr. Acer's evidence in connection with stockyards, I think it is very largely correct. He may have over-estimated a little with regard to the accommodation, although I will not say positively that he did, but perhaps his assertions were not taken as he intended them to be. Mr. Acer stated that there was no such stock-yard accommodation on the continent of America as there is at Montreal. I also maintain that the accommodation at Montreal is as good as there is in any other place on the continent of America. I agree with him largely in his evidence on this point—and why do I do so? There is no place on the continent of America where stables are built for cattle in transit on the cars except at Montreal, and the first stable that was built for the accommodation of such cattle in the Dominion of Canada was built by me. That was eleven years ago, and there is no other similar accommodation to-day, either in the United States or anywhere else.

Therefore, I say that there is better accommodation in Montreal than in any other place on the continent of America for cattle.

Q. You contradict Mr. Acer on that point?—A. No; I do not.

Mr. ACER.—That is all I want to get at. I may say that I have no more interest in this dressed beef than any other man in the room. I do not see why some people here insist that I am a dressed-beef man, for I only made the remark that in a few years the dressed beef trade would gain ground, and I think most of the cattle shippers believe that, too.

Mr. KENNEDY.—I do not believe it, for one.

Mr. ACER.—I say there are millions of quarters of beef sent to England from the United States now when a few years ago there were not so many hundreds, and Englishmen did not pay half the money for American beef that they are paying to-day.

Mr. KENNEDY.—You will never see the day when Canada will be able to compete with the United States in dressed beef in the English market. We had better take care of our trade as it is, and try to improve it.

By Mr. Acer :

Q. You make the assertion that there are four companies controlling the fresh beef trade of the United States and that they are monopolies?—A. Yes.

Q. Why are they monopolies?—A. Simply because they are too wealthy for any one to compete with them.

Q. There is no particular harm in that?—A. There is a particular harm to the poor man but not to the rich.

Q. Where does the poor man get hit?—A. As the trade is conducted now, the man with limited means cannot get into the business.

Q. But the monopolies are helping the poor man when they are selling their beef cheaper?—A. They are not helping the poor man.

Q. You said that on account of the high price for corn here, beef cattle are 1½ cents a pound dearer here than in the United States. I maintain that cattle can be fattened in this country to-day as cheaply as they can be fattened in the United States.

Mr. KENNEDY.—I deny that.

By Mr. Smith :

Q. Do you say that cattle are cheaper in the States than here by 1½ cents a pound?—A. Yes; Mr. Acer is a large feeder of cattle at the distillery, and he is paying to-day \$20 a head for them, whereas he would only pay about \$10 in the United States.

Mr. ACER.—There is no secret about what I am paying. I am paying \$16 a "steak," and I do not think that there is a distillery in the United States gives as good a quality of slop. I think the cattle are fed as cheaply here, and I think we can feed cattle with peas at 65 cents a bushel as well as they can feed them at 54 cents a bushel for corn in Chicago.

Q. How can you compete with a country where the food of cattle is so cheap that they use it for fire?—A. They are not using it to-day for fire in the United States.

Mr. KENNEDY.—Mr. Commissioner, I know that they have been paying \$20 a "steak" for feeding cattle in this Dominion within the last ten years, when the same thing only costs them \$6 or \$7 or \$10 in the States. There was one time in Canada when it would cost as much to feed one bullock as it would to feed three in the United States. I have had 50,000 cattle in distilleries, and I know that they really cost me only \$8 a "steak" in the States, while at the same time they were paying \$20 in Canada. There is no time within the last ten years when there was not a difference between feeding cattle in the United States and feeding them here of 1½ cents per pound on the animal.

By Mr. Greenshields :

Q. What do you speak with regard to, when you say that the accommodation is as good in Montreal as in any part of the continent of America?—A. I refer to the stock yards.

Q. You do not refer to the shipping facilities of the port of Montreal?—A. I refer to the stock yards proper; that is all I refer to.

By Mr. Smith :

Q. What have you got to say about the shipping facilities on the wharf?—A. There has been a great deal said here about the absence of good facilities on the wharf, and there are many reasons to find fault with it, no doubt. I would like to see the blame for this want of accommodation placed on the proper parties who are responsible for it. The only thing that is needed here to complete the facilities for the shipping of cattle is to get one more railway track on the wharf, and use it expressly for the exportation of stock, and after that is done you will not hear a complaint for the next five years about want of accommodation. There is, I believe, room on the wharf to put down this railway track, and I know that the Harbour Commissioners will be only too glad if they can do it, because they are as much annoyed as we are about this nuisance of leaving cattle on the wharf.

Q. And why do not the Harbour Commissioners put down a third track?—A. I think that they are willing to do it and that they intend to do it. There are parts of the wharf, of course, where they cannot put an extra track, but I think they can put down a track which would answer for doing this cattle business on the wharf. If the cattle come down there by night in the cars, and if they are loaded from the cars as soon as the ship is ready for them, there will be none of this harsh treatment of cattle by their being driven through the streets, and none of this talk about cattle jumping into the river. They can be taken out of the cars and driven quietly on to the ships and there would be no trouble about it, and the work would be done in half the time. They have been talking about a union stock yard here. I wish they had one in Montreal, but there is no use in our talking about something that will happen forty years from now. I will guarantee to show Mr. Bulmer, the president of the Harbour Board, that there is sufficient ground for a third track on the wharf, and I know that the steamship people are willing to share a part of their wharf accommodation with the Commissioners, in order to have that third track down.

Q. Did you ever hear any reason why the Harbour Commissioners would not complete this much-needed improvement?—A. The only reason that they gave was that they had not room enough on the wharf. I am prepared to show that there is room enough for another track, and I do not think it can be denied. The only thing I can attribute the delay in putting down the track to is, that we were going to have more improvements made in the harbour very shortly, and I have no doubt that those who come after us will get the benefit of these improvements. As far as I am concerned, I would like to have a little of those improvements while we are here ourselves.

Q. Do you think it can be done?—A. Yes; I will go with you before you leave the city, if you wish, and show you where this third track can be put down on the wharf.

By Mr. Greenshields :

Q. You say you can bring the animals down on the cars, and load them from the cars to the steamers?—A. Yes.

Q. Are you in favour of having the dead cargo put on board ship before the animals are loaded?—A. Yes; there is no man who would not prefer that, as far as it is possible to be done. In addition to that, before the cattle are brought down in the night, you should have the steamer ready to take the cattle, and not keep them on the wharf. My opinion is, that the cattle should be brought down at any time of the day.

Mr. TORRANCE, of the Dominion Line.—As a rule, the cattle are not brought down until the steamer is ready.

Mr. KENNEDY.—They are sometimes brought down before the steamer is ready, and that is why I would like to distribute the blame amongst all parties concerned. The cattle are ordered down for instance, say at 12 o'clock in the day, but they may be sent down at 10 o'clock, instead of 12. Instead of having a bunch of thirty, or forty, or fifty cattle when the ship is ready to load them, they are sent down from the yard before their time, and there may be three or four hundred head of cattle on the wharf. Under that system of doing business it would take a whole wharf to accommodate the cattle trade.

Q. When the cattle are ordered down is the dead cargo always completed?—A. Sometimes it is not.

Mr. TORRANCE.—The cattle have got to be ordered down twenty-four hours in advance, because the cars can only come down on the wharf at night time.

Mr. KENNEDY.—That is when the animals are taken down on the cars. There is no trouble in loading them from the railway cars at any time, but the trouble comes in when they are driven down before they are ordered by the steamer. Instead of their being sent down quietly in small lots, for some reason or other they are all sent down at the same time.

Q. There is no necessity for that?—A. Not the slightest, and I wish the cattle exporters would be honest enough to say that they are a great deal to blame for this overcrowding of the wharf.

Q. It is not the fault of the steamers?—A. It is the fault of the owners of the cattle, who do not attend to their business, but leave it to somebody else.

By Mr. Greenshields :

Q. Is it a fact that cattle are kept on the wharf twenty-four hours in the cars?—

A. If they are so kept they have no right to be there. I know many cattle owners who put cattle on board twenty-four hours before the ship was ready, to sail and they have even sent cattle down before the ship was ready to take them, or, before she ordered them.

Q. You think the cattle exporters do not attend to the business themselves?—

A. Not as closely as they might; and then the Harbour Commissioners and the steamship agents get the blame for any neglect or difficulty that occurs.

By Mr. Craig :

Q. In the case where cattle are kept for twenty-four hours on the railway cars are they not ordered to the ship from western Ontario to be loaded on a certain day, and when the cattle arrived the steamer was not ready?—A. Yes.

Q. And then, as a matter of convenience the cattle men ask to be allowed to take the animals on board the steamer?—A. Oh, yes; I do not say that all these animals come from the stock yard, but I do think that cattle are taken from the stock yard before the ship is ready for them and before they are ordered. I say that the cattle should not leave the stock yard until the ship is ready, and the ship should not ask for them until she is ready. Sometimes there will be twenty shippers on the one steamer, and there is a rivalry to see which of them will get their cattle on board first. I may say to the Enquiry that in my opinion it is almost impossible to conduct this cattle business in Montreal properly if the Harbour Commissioners do not build a third railway track. If the Harbour Commissioners do not build this track, let them take the whole blame.

Mr. CROWE.—Would the cattle get more abuse in being driven down from the yard at an early hour in the morning and leaving them on the wharf for twelve hours, or in driving them down through the crowded streets.—A. There is no necessity for the cattle to be on the wharf for twelve hours. If the animals do not get any more abuse than they get going down in cars and remaining there for four or five hours we have nothing to complain of. The cattle that come down here from the Rocky Mountains look just as well as the cattle that come from Toronto. Unless

you knew where they came from, you would not think they came 200 miles. There is no other way to overcome this difficulty about shipping cattle than to put another track on the wharf.

Mr. CRAIG.—Could both railways use this extra track on the same day.—A. Certainly.

Mr. SMITH.—Would it accommodate all the different lines?—A. Yes; it will accommodate all the railways in the country. If you build it you will not have any more complaints. I know that the steamship companies are very anxious for it. Of course, I say this without consulting them, but I am sure that it will not obstruct any trade on the wharf. Now, with regard to what Mr. Perrault said about cattle going into the river—

Q. Are they lost when they go into the river?—A. They generally get them out, but that is of little consequence, because they have no business to allow them to go into the river.

Q. The animals jump into the river themselves?—A. If they do it is from carelessness on the part of those in charge of them. I have handled 300,000 head of cattle on this wharf myself, and I have never seen ten cattle in the river all that time.

Q. How do they get into the river.—A. They push each other in.

Q. How long would they swim around before they would drown?—A. I have known them swim around all night and part of next day and be taken out afterwards. There is not much danger to the animals in this, but I am not much in favour of this swimming business. I do not advocate it by any means.

Q. You have stated that if the Harbour Commissioners put down an extra track on the wharf the whole difficulty would cease?—A. I certainly think that if they do so the difficulty would be removed.

Q. Do you go on board each ship of the Allan and Dominion Lines which carries cattle before she leaves the port?—A. Yes; I have been on board every vessel that has left this port during the last ten years.

Q. What can you say as to the condition of the men in charge of the cattle, and the evidence which has been given as regards their treatment?—A. I may say that there is no person in the room who was more surprised at the evidence given yesterday than I was. I have known that young man Briens, who gave his evidence here, for five or six years, and I have never known him to tell a lie. The evidence given yesterday surprised me more than any other man in this room. About eighteen months ago there was a complaint of the want of bedding on some of the Allan vessels, and it was immediately taken to the head office. The captain was sent for, and Capt. Barclay, who has charge in Montreal of all the ships of the Allan Line, was sent for, and I can take my oath that Mr. John Allan told him to see that no ships, left this port without proper accommodation for the cattle, men on board. He gave positive orders to see that this was done. The strangest thing about it is that I have never known a complaint in reference to the Allan Line since; but yet, in accordance with the evidence taken yesterday there is plenty of room for complaint. I never in my life heard a complaint about the food supplied until yesterday. I heard complaints about the beds but not about the food; and the only thing I blame this young man Brien for is for not making this complaint before yesterday. Any man who would uphold such treatment of the cattle-men as that is not a man. I am not going to defend here anything that happened on board ship that should not be defended. I believe it is wrong that such treatment should be given to the cattle men, but I am sure that when it is represented to the proper authorities they will see that it is remedied.

By Mr. Jas. Allan :

Q. Do you see the accommodation which is provided for cattle men on board steamers before the ship starts?—A. I only am concerned with the accommodation so far as the bedding is concerned. In some ships, of course, it is good; but as a rule the sleeping accommodations have not been so good as I would wish to see them.

Q. Was it not as good as the accommodation afforded to the sailors?—A. No, sir.

Q. Do you think is very unsuitable for the people who use it?—A. I will not say that, but I think the accommodation should be better than what they have, had and it would cost scarcely any more. Years ago, when the cattle business commenced, the cattle men had their utensils furnished them. Every man had a knife, a fork, a cup and plates, and the cattle exporters had to pay for them.

Q. Has that system been dropped?—A. That has been dropped, although the steamship people pretend to furnish them with these articles; but it seems, according to the testimony given yesterday, that the food has to be taken to them in a water pail.

By Mr. Smith:

Q. Do you know whether the cattle foreman makes anything out of hiring the other hands, or does he get a bulk sum for taking the cattle over, and consequently hires the cheapest men? Does the owner of the cattle pay the men or does the foreman pay them the money?—A. You ask me whether the foreman makes anything privately out of hiring the men, and in reply I wish to say that the system which exists at present of not paying the men who go in charge of the cattle is all wrong, and is calculated to demoralize the men who follow this business.

By Mr. Allan:

Q. Explain what you mean by that?—A. A great many men get nothing at all for going across in charge of the cattle, and in several instances, where it was agreed the men were to be paid money on the other side, the money was taken by the foreman, and the men were left on the streets, without a penny in their pockets. That can be proven here by several men in this room. A system has sprung up by which some of the men get only a mere nominal sum, and in many instances they get nothing whatever for going across.

Q. Do they get a lump sum for the job?—A. The foremen are paid well, and some of the other hands are paid well, but there are more men carried across in charge of cattle than there is any necessity for, and they are so carried because they are good for nothing. Imagine a man going over to England from here for nothing, and if he has nothing when he lands and gets nothing on the way over, you can imagine his condition in England with no money in his pocket. A man is no use any how if he works for nothing. Each man engaged on the boat should get his order for money on the other side, and the foreman should have no control over it. One good man should be sent in charge of twenty five animals, and I think that three good men could take care of a hundred cattle.

By Mr. Allen:

Q. As a result of this system, what sort of men go across, as a rule, as cattle assistants?—A. You can see at a glance that if you get men you can hire for nothing you cannot expect first-class men. There are a good many of them go for the sake of getting a passage across, and you would be surprised at the class of men that go that way.

Q. Were they professional men?—A. I have seen doctors, lawyers and clergymen.

Q. Did you ever see any members of Parliament?—A. I do not know whether some of them were members of Parliament or not; the only question I asked them when they came to me was: "Were they troubled with dyspepsia," because if they were I would recommend that going across with cattle would be a sure cure. Of course, I always took good care that they had a sufficient number of good men to take charge of the cattle without these extra hands.

Q. They were not sent across to do any work?—A. No; they only wanted the passage across, and the steamship people would never know this if the evidence had not been taken at this Commission.

By Mr. Greenshields:

Q. They were personal friends of yours that you were getting across free?—A. I never saw some of them in my life before I saw them on the ship.

Mr. SMITH.—You never got any personal friends a free passage across in that underhand way?—A. I never saw the majority of them until we got them on the ship.

Q. Did they offer to work?—A. Yes; they offered to work, and I have seen them go on board in rough clothes prepared for work. How much work they did I do not know.

Q. Would these men go to their bunks, and refuse to turn out and do work among the cattle?—A. I do not know anything about them, but I believe they would turn in in rough weather, not being able to do work. I recommend that all the cattle men should sign the articles of the ship, which would give them the privilege of being in the same position as the sailors.

Q. Do you approve of the men being engaged by the cattle shippers themselves or by the steamship agents?—A. I think the cattle shippers should engage their own men.

Q. Have you read this book of Mr. Plimsoll's in reference to the cattle business?—A. I have.

Q. Is there any truth in the statements contained in the book?—A. No truth whatever. The opinion that I formed of it was, that it was too absurd for us to notice it.

Q. Then it is absolutely untrue?—A. Yes, sir; absolutely untrue.

By Mr. Smith :

Q. That is, as regards the Canadian cattle trade?—A. Yes; and I believe it is untrue as regards any other cattle trade in the world.

By Mr. Greenshields :

Q. Is it true with regard to the shipment of cattle from American ports?—A. I do not believe one word of it is true. There would be no object in inflicting these cruelties on the animals, and it is ridiculous to notice it.

Mr. SMITH.—These statements were taken from a letter addressed to the English papers. It was stated that paraffin oil was poured down the ears of the animals, and such things?—A. The man who made that statement ought to be in a lunatic asylum.

By Mr. Allan :

Q. What do you think as to what would be a sufficient space for each animal on board ship?—A. It is well known amongst cattle owners here that I have always advocated a space of 30 inches; and to prove that I am sincere in advocating that, I only allowed them 30 inches each when I built my stables. Every man going to these stables will see every bullock in them lying down, if they wish.

Q. Does that give them plenty of room?—A. Yes.

Q. Do you mean 30 inches for distillery cattle?—A. Yes; and for farmers' cattle.

Mr. JOHNS.—Have you ever crossed the Atlantic with cattle?—A. I have not.

Q. Do you know the requirements as to space on board ship?—A. Yes; I do. I maintain that a space of 2 feet 6 inches is enough, although if they got 2 feet 8 inches it would not do them any harm.

Q. Would you prefer the space should be 2 feet 8 inches?—A. 2 feet is 6 enough, in my opinion; and if the steamship people would give spaces of 2 feet 8 each they would take good care that they would get pay for it. I think the cattle shippers in such a case would be paying for something they did not want. When freight is high 2 inches extra space to each animal means 5 shillings a head. I venture to say that every man in the cattle trade here, when navigation opens in the spring, will be looking for a 2 feet 6 space at 5 shillings less than the 2 feet 8 space. I have no objection to the animals having 2 feet 8, but I think that if they take the extra 2 inches the cattle exporters will be paying for something they do not want.

This concluded the evidence of the witness.

HENRY BULMER, President of the Harbour Board of the City of Montreal, was recalled, and gave the following evidence.

Mr. SMITH.—It has been stated here that if there were a third railway track on the wharf a great many of the difficulties of loading cattle would be removed. Mr. Kennedy has stated that there is room for a third track on the wharf, and that for some unaccountable reason the Harbour Commissioners have not put down that track.

Mr. KENNEDY.—I think that is a little too strong. I said they never did put down the third track, but I do not think it was ever properly brought to their notice until now.

Mr. SMITH.—I understood you to say that the trade asked for it. I wish Mr. Bulmer to explain if he ever heard of this demand for a third track on the wharf and, if it is practicable, why it was not put down.

Mr. BULMER.—Mr. Commissioner, I heard what Mr. Kennedy said in giving his evidence here, and I believe that his experience in this business entitles his opinion to very great weight. All that he has said about the trade is based upon actual knowledge. But in this particular matter he has not realized all the difficulties of the situation. The laying of a third track is a matter that has been talked over again and again. As I said the other day, there are only two tracks on the wharf at the present time, and each of these tracks practically belong to the railway companies, who lease them from the Harbour Commissioners. The laying of a third track on the wharf is, in my opinion, not practicable. At the meeting recently held in the City Hall it was spoken about. The railroad men, speaking on the inspiration of the moment, said that if another track were laid down on the wharf it would overcome all the difficulties, and a resolution was passed to that effect and met with the approval of the meeting. If a third track could be laid on the wharf it would be a very good thing; and the Harbour Commissioners, at their first meeting after that resolution was passed, gave instructions to their engineers to have a report made as to the practicability of it. The report was only ordered recently, and I think it has not yet been prepared. I know there are difficulties in the way of laying this third track which Mr. Kennedy or any one in his position cannot see. It is not possible to lay a third track the whole length of the wharf, for every one knows that the wharf is so narrow at certain places that there is only sufficient room for a carriage way. I hope, however, that these new harbour improvements which are contemplated are not so far away as Mr. Kennedy seems to think, and when the improvements are made there will no doubt be plenty of accommodation for the trade. I do not think that steamship companies are prepared to have the present space allotted to them on the wharves curtailed. We all know that their space is too limited at present, and I have good reason to think that they could not afford to give up any of it to allow a third line to be laid for the cattle trade. If, however, the third track could be laid, it would give a great deal of accommodation. There is at present plenty of width for a third track at the lower end of the harbour, and if the railway companies would apply for permission to have a track laid there the Harbour Commissioners would give that permission without any hesitation whatever.

Q. I suppose that would only apply to the Canadian Pacific Railway?—A. Oh, no; it applies to both. The Grand Trunk Railway Company have a track extending down. The third track would have to be used in common, and switches would have to be connected with it, so that they could run the trains under proper regulations. There are great difficulties in harmonising the conflicting interests of these two railways, and these are difficulties which I think Mr. Kennedy did not look at.

Mr. KENNEDY.—I know there is no room for a third track in some places, but there is room in others, and I think the railway companies should get along if a third track were laid in certain places.

Mr. BULMER.—You cannot place any track along the Allan, or the Dominion, or the Beaver Line sheds, without sacrificing some of the conveniences that the companies have now.

Mr. KENNEDY.—Mr. John Allan told me that he would allow you to put a track right into his shed.

Mr. BULMER.—The railway companies would have to be consenting parties to do their business in that way. The whole question is surrounded with difficulties. One gentleman connected with the shipping of cattle, seemed to think that the cattle might be brought down from the stock yards without going into the cars at all. I can speak for the Board of Harbour Commissioners, and I say that they have only one object in view, and that is to give every facility possible for the trade at this port.

Mr. KENNEDY.—I believe that.

Mr. BULMER.—If there is a possibility of making any improvement it will be done, but it is impossible to have cattle, trains now running at all hours of the day along the wharf, for it would practically shut out every other business. If arrangements can be made to run this third track, and the consent of the railway authorities obtained, although it may require some sacrifice on the part of the steamship lines, I have no doubt that the scheme will be carried out.

Q. When could this be done?—A. It could be done at the opening of navigation, if the arrangements are carried out. I was speaking to some of our officers who are working at this report I have referred to, and they say it is surrounded by great difficulties, but if sacrifices are made by the steamship lines and if the railway authorities consent I have no doubt it will be carried out.

Q. Is it not in the interest of the steamship lines to get this third track on the wharf?—A. As long as the ship-owners get the cattle on board I suppose it does not interest them to any great extent as to how they are got to the wharf. Some gentlemen in this room have been pressing on the Harbour Commissioners very strongly to have a regulation made that ships loading cattle shall go down to one particular place on the wharf. On the face of it, that looks a feasible proposition, but there are difficulties in the way of that which I doubt very much can be got over. There is the trouble, and expense, and danger of moving a ship, and I fancy it will be less trouble to remove the cattle to the ship than to remove the ship to the cattle.

Mr. CUNNINGHAM.—Could not the cattle be loaded on to the ship by lighters?—A. Certainly they could, but the risk in moving a ship is a greater consideration than the actual outlay. It is very easy to say, take one of these large ships down to another part of the wharf; but it is quite a different thing when you have to handle that ship. Mr. Torrance and the other ship-owners can explain that better than I can. I think, however, that it is a very serious thing to move a ship about in this harbour, drawing the depth of water that they do, and in some places nearly touching the bottom of the river.

Mr. JOHN ALLAN.—It is not a question of expense; it is a question of danger to the ship, and it would be practically impossible to do it.

Mr. TORRANCE.—There is a great danger in moving ships about in the harbour, and there is no necessity for it when the cattle can be moved to the ship.

Mr. BULMER.—I may say that if any improvements are suggested to the Harbour Commissioners they will do their very best to carry them out. It would take 100 acres of land to provide accommodation for these cattle near the wharf, and I think there would be some difficulty in getting that land.

Mr. TORRANCE.—In New York the cattle are brought alongside the ship in lighters, and they are brought to the ship when they are wanted. The trouble of moving a ship is obviated by that system, and if cattle were carried to the ships in lighters at the port of Montreal the extra expense would be a mere trifle for each animal.

Mr. ACER.—I claim that it is better to railroad the cattle down to the wharf, than to bring them alongside the ship in these lighters. In New York they are not satisfied with these lighters, because the cattle are rushed on them in a bunch, and a great many of the animals get damaged on the lighters going to the steamers.

This concluded the evidence of the witness.

M. C. BAKER, Veterinary Surgeon, Assistant to Dr. McEachran, Chief Veterinary Surgeon for the Dominion of Canada, gave the following evidence:—

Dr. McEachran, the Chief Veterinary Inspector for the Dominion, is at present in England on business, and cannot be present at this inquiry.

Dr. Charles McEachran is also an assistant to Dr. McEachran with me, and we have another assistant during the shipping season.

By Mr. Smith :

Q. Please tell us how the cattle are inspected when they are put on board ship for exportation?—A. I examine the cattle first at the stock yards, and after the cattle have been examined there we give the shipper a certificate of inspection. We ascertain the health of the animals before they are brought down to the wharf, and we give the shipper a certificate that we have inspected the cattle and that they may be loaded. They require the certificate under the authority of an Order in Council passed in connection with the Contagious Diseases Animals Act. The following is the Order in Council:—

ORDER IN COUNCIL.

12th May, 1888.

PART IV.

“CONVEYANCE AND SHIPMENT OF ANIMAES.”

Carriage of
diseased
animals.

Sec. 20. To provide against the possibility of diseased animals being carried from place through Canadian territory, or conveyed to and shipped from Canadian ports, it is ordered as follows:—

Inspection.

Sec. 21. An inspection of animals will be made at any place or port in Canada to which animals are carried, in the manner prescribed by the instructions which may be given from time to time by the Minister of Agriculture.

Animals
exposed.

Sec. 22. Such animals as may be found to have been exposed to contagious or infectious disease, or to be labouring under contagious or infectious disease, shall be either detained or slaughtered, in pursuance of the provisions of the said Act, under the direction of the Minister of Agriculture.

The access of
officers.

Sec. 23. The officers appointed to carry out the law and the present regulations shall have free access to any boat, ship, vessel, car, van or other vehicle, or to any place where animals may be found, in order to inspect the same, and, under instructions from the Minister of Agriculture, deal with animals having been exposed to disease or with diseased animals, and the articles employed in their service, in the manner contemplated by the said Act, under the penalties prescribed thereby against any person contravening any of the provisions thereof or of any regulations made thereunder.

Cleaning,
purifying, &c.

Sec. 24. The said inspectors or officers may, if it be deemed necessary, order the cleansing and purifying of any place, vessel, vehicle or other article having been made use of to receive or transport, or being about to receive and transport, animals, and direct such precautionary measures to be taken as may be considered advisable.

Proprietors
and dealers to
give notice
and afford
assistance to
inspector.

Sec. 25. Proprietors or dealers in stock having moved or intending to move animals towards a port of embarkation in Canada for export must give notice to the inspector appointed for such port, by telegraph or by letter, at least twelve hours in advance of the time of arrival of the said animals for shipment, and during the progress of inspection shall, with the hands at their disposal, give every required assistance to the inspector at such port, and move the animals according to the directions given to them by the said inspector. In case the owner refuses or neglects to furnish the necessary assistance the inspector may

employ men at the cost of the shipper, which shall be paid to the inspector before a clean bill of health is given.

Inspector when not to permit cattle to be laden on board ship.

Sec. 26. In order to prevent the danger of contagion or infection resulting from the overcrowding or overloading of animals on board ship in any port in Canada, the inspector shall not permit cattle or other animals to be laden on board any ship in such port until he shall be satisfied that suitable space and provision has been made for the number of cattle or other animals to be shipped on board such vessel, and that a greater number of animals shall not be shipped than such ship can safely and properly carry, and such inspector shall not grant a clean bill of health to such ship until all such provisions as aforesaid shall be made to his satisfaction.

Clean bill to precede clearance of ship.

Sec. 27. The Collector of Customs of any port where such inspection as aforesaid is adopted and required shall not give a clearance of any ship having cattle or other animals on board for exportation without being shown a clean bill of health, signed by the inspector, to the effect that the measures provided by the said Act, and the present regulations as hereinbefore set forth, have been obeyed and carried out.—(O.C., 23th April, 1880; 5th April, 1881.)

HEAD ROPES.

Importation of head ropes.

Sec. 28. The importation of head ropes which have been used for tying up cattle in the United Kingdom or on board ship is prohibited, and all vessels neglecting to observe this regulation shall be liable to be declared to be infected under the "Animal Contagious Diseases Act."—(O.C., 27th April, 1881; 9th February, 1882.)

Q. You have described how you inspected cattle at the stock yards. What do you do next?—A. We give a certificate that the animals are in good health, and then we visit the ship after the cattle are loaded, and see that the cattle have sufficient room on board the ship.

Q. You do not go on board the vessel first, to define what space they should have?—A. Not generally; but we visit them after they are put on board the ship and make another inspection.

Q. If you decided that the cattle had too little room on board ship, what would you do?—A. We would take some of them back on the wharf, or remove the cattle from the stalls which were too full.

Q. If they had only a space of 2 feet 6, and you considered they should have a space of 2 feet 8, how would you remedy that?—A. I would go to the ship and remove the animals from the stalls which were too full, or remove the partition down farther, so as to give them more room.

Q. If the space were 2 inches too small would you remove the animals?—A. I would remove the animals if they had not sufficient space. The stalls, as a rule, are built for four animals. There is an understanding which was arrived at by the shippers and the ship agents that 2 feet 8 should be the space allowed for fat cattle in the early part of the season, and 2 feet 6 in the latter part of the season. It is understood that the rule about 2 feet 8 inches should apply to the early part of the season, when the heavy cattle are being shipped.

Q. But there is no official regulation about this, is there?—A. There is no regulation defining space.

Q. Did Dr. McEachran ever suggest that there should be a regulation by Order in Council to provide a certain amount of space?—A. Yes; he has asked for that.

Q. What space did he recommend?—A. He recommended 2 feet 8 inches. At first he thought it should be 2 feet 9 inches, but afterwards the space was reduced to 2 feet 8. Several years ago 2 feet 9 inches was the space that was commonly given to each animal.

Q. In your opinion, do you think 2 feet 9 inches for each animal would be better than 2 feet 8 inches?—A. I think 2 feet 9 would give them plenty of room, but I do not think there are any ships which allow 2 feet 9 inches now.

Q. If a certain space was to be made a regulation, do you think it should be 2 feet 8 inches?—A. I think that 2 feet 8 inches would be sufficient space for the fat cattle in the earlier part of the season. I think that five “stockers” should be put in the place of four fat cattle. If the four fat cattle were allowed 2 feet 8 inches each five “stockers” would have sufficient space in the place of four fat animals.

Q. If the fat animals had a space of only 2 feet 6 inches each, do you think there would be still enough room for five “stockers” in the place of four fat cattle?—A. If they were small it would. The “stocker” is an animal that varies much in size.

Q. But if you were making a regulation as to the space by Order in Council, what space would you recommend?—A. I would recommend 2 feet 8, and I think if this space were allowed that five “stockers” under 1,000 lbs. each could be comfortably carried in place of four fat cattle.

Q. How do you examine this cattle to find out if they are diseased?—A. We examine all the cattle together to see if they are in good health, and if we find that an animal is not in good health we make a more particular examination of it.

Q. Do you examine each animal individually?—A. No; it would be impossible to do that, considering the number of cattle we have to examine. If they all appear in good health we are satisfied, and we can easily see whether an animal is sickly-looking or not.

Q. Did you ever pass an animal as healthy that turned out to be unhealthy?—A. We never passed an animal that was unhealthy in the sense that it was affected with any contagious disease. There have been some animals detained on suspicion, but they did not turn out to be suffering from contagious disease. There is no contagious disease in this country whatever.

Q. Do you approve of cows in calf being put on board ship?—A. That would depend very largely on the period of pregnancy. In the early period of pregnancy they can be carried with perfect safety, but if they are near calving I think it is rather dangerous.

Q. You think it is not a good place to have them calve on board a vessel?—A. No; I would not recommend that they should be put there to calve.

Q. You have no power, I suppose, to prevent them shipping a cow in calf?—A. The fact that a cow is in calf does not bring it under the head of having contagious disease.

Q. If you had power, would you prevent that?—A. Yes; I think they should be prevented from being put on board ship when they are near calving.

By Mr. Bond, Marine Underwriter :

Q. Would not the knocking about of such an animal in a storm entail cruelty?—A. It would be more cruel to a cow in calf than to an animal not in that condition, and it would likely bring on premature delivery. However, the lower animals are delivered very easily; but nevertheless, I think that an animal would suffer more if she were in that condition than a steer would.

Q. We have heard it stated by some of the witnesses that they could not carry sufficient fresh water on board for the animals. Do you think that would injure them?—A. I do not know anything personally about that, but I saw that it was so stated during this enquiry. I should think it would be very bad indeed for the cattle if they did not get sufficient water.

Q. What quantity of water do you think an animal should have, so as to give it sufficient?—A. I should think that a cow ought to have at least 12 gallons a day, and that the water should be fresh and cool.

Q. Did you ever hear cattlemen complain of an insufficiency of water on board ship?—A. I have heard no definite complaints, but I have heard it stated that on some ships the water was not as cool as it should be. I never heard any complaints

that it was not sufficiently condensed, but there was some complaint that there were not sufficient coolers on board to enable them to get the water cold enough. Of course, it is quite hot when it runs through the condensers, and there should be some receptacle in which to cool the water. If the water is condensed at all, I do not think it possible that there could be any salt in it. It is either condensed or not condensed; and if it is condensed it must have passed through the form of steam, and it could not carry salt. Unless, there was a break, or something of that sort, in the condenser, there could not be any salt in the water.

Q. Do you think any American cattle get into Canada for shipment to England?—A. Not to our knowledge. They are absolutely prohibited to enter Canada for exportation, and when they do come in they have to go into quarantine for 90 days, by which time they are acclimatized, and are proven free from diseases. No cattle could get into Canada for exportation, unless they were smuggled, and I am sure it is impossible to smuggle any large number of them. I do not think there is any danger of American cattle getting into here for shipment.

Q. You think that the cattle, as a rule, are taken across the ocean in good condition?—A. Yes; I believe so. And it has been reported to me that they often land in better condition than when they were shipped.

Q. Did the cattle ever come down to the stock yards in such large numbers that you could not inspect them?—A. No; I do not think so. As a rule, there is plenty of time to inspect them in the yard, and if we have not time to inspect them they have to wait for inspection.

Q. I notice that at a meeting held on the 3rd of October Dr. McEachren stated that cattle sometimes come in such large numbers that there is not time to inspect them?—A. That would mean that there was not time to inspect them for the particular ship for which they were intended. Before the cattle are loaded on the ship, or before they can be loaded, they require to give a certificate to the ship that they have been examined and found free from disease.

Q. Is it possible that any cattle are shipped from this port without being inspected?—A. I think there was a small lot of cattle once put on board ship without being inspected.

Q. How did they obtain their certificate?—A. The man who put them on board could tell you that. It was the attendant of the cattle who did it, but I do not think the owner of the cattle knew anything about it. I think this was done on two occasions, but they were put off the ship and were inspected on the wharf, and when they were found to be healthy they were put back on board the ship again.

Q. And they got on board without being inspected?—A. Yes; but they were put off the ship again.

Q. Did you not inspect them on board ship?—A. Yes; we inspected them on board ship, but we felt there was a principle involved that could not be overlooked, and the ship people were anxious that we should take them off the ship and make them comply with the rules. This we did. I am quite sure that Dr. McEachren did not mean that the cattle were not inspected at all. He meant that they could not be inspected in time. Every animal that goes on board ship is inspected.

Q. How did they obtain the certificate to get these animals on board ship?—A. They got a certificate by some mistake.

Q. Do you know the person who did it?—A. I know the owner of the cattle, but I am quite confident he knew nothing about it. The cattle owners would not do such a thing, because they are most anxious to have their cattle inspected, and I have never known any one to try and avoid inspection. It would injure their business considerably if the cattle had not the certificate of inspection. The cattle owners have always aided the veterinary inspectors in every possible way.

Mr. ALLAN.—The cattle could not escape inspection entirely, because you saw them on your second inspection on board ship?—A. Yes; all the cattle are inspected on board ship.

Mr. ALLAN.—Is there any system by which the people who have the control of the cattle going on board the ship know whether they have been inspected or not?

—A. Yes; the Veterinary Inspector gives them a certificate at the stock yards, and they have to show that certificate before they are allowed on board ship. Before the final clearance or bill of health is given we collect the certificates of inspection and make sure that all the cattle have been inspected.

By Mr. Greenshields :

Q. The inspection would be much easier if you had a union stock yard?—A. It would be much easier and I think it would be more satisfactory.

By Mr. Cunningham :

Q. What is your opinion as to the system of loading hay on top of the cattle pens?—A. I think there should not be any more hay put on top of the cattle pens than would do the animals until they are a short distance below Quebec, and that hay should be covered.

Q. Is it not a fact that you have seen more hay on the cattle pens than was necessary to feed the animals on the passage down the river?—A. Yes.

Q. Would you advocate that all the dead cargo of a vessel should be completed before the loading of cattle is commenced?—A. I think that is a very important matter, and I would like as near an approach to permanent fittings as possible on board ship. I think it a very important matter that all the stalls should be completed and all the other cargo loaded before the cattle are taken on board. All the stalls should be completed, except on the part of the ship which is required to bring the cattle on board.

Q. Do you think that a space of 2 feet 6 inches for each animal is dangerous?—A. I would not say that 2 feet 6 inches was dangerous, but I think the animal is much more comfortable with 2 feet 8 inches, and that he would be landed in better condition.

Q. You think it would be worth the difference for the comfort of the animal?—A. Yes; I think it would.

By Mr. Torrance :

Q. Is it not a fact that in the United States, where the cattle are larger than the Canadian cattle, the space allowed is only 2 feet 6?—A. Yes; so I am told.

Q. There are large numbers of cattle sailing from the United States which are allowed 2 feet 6 inches for each animal, and there are no complaints. If they carry larger cattle from the American ports in a space of 2 feet 6 inches, and carry them well, I do not see on what ground the Canadian steamers shall be required to give a space of 2 feet 8 inches. Of course if the ships are required to give more space, the shippers have got to pay for it.

MR. SMITH.—According to the evidence the cattle exporters have given here they all seem anxious to do that.

MR. TORRANCE.—Of course, if they are prepared to do that, it is all right. I wish to ask Dr. Baker, whether he does not think that if cattle are shipped from the United States safely in a space of 2 feet 6 inches, the same cattle could not be shipped as well from Canada?

DR. BAKER.—I certainly prefer 2 feet 8 inches. I know the cattle are more comfortable with this space, and it seems to me that if they are landed in better condition than they would in a smaller space, it would be worth the difference in cost.

This concluded the evidence of the witness.

MR. E. L. BOND, representing the Marine Underwriters, files the following additional recommendations made by the underwriters, and which recommendations were resolved upon at a meeting held since this enquiry opened.

Regarding Inspector.

In order to more clearly define our views on this officer we are of opinion :—

He should be the nominee of the Government alone and responsible to the Government only, bearing the same relation to the Government as the Veterinary Inspector does at present.

He should be entirely independent of local influences.

The salary attached to the office should be large enough to warrant applications from first-class men.

That, while he might be attached to the Port Warden's office, he should be entirely independent of the Port Warden, so that any decision given may be final, except as regards the decision of the Government.

RICHARD MEEHAN, of the city of Montreal, foreman in charge of cattle, on board ship between Canada and Great Britain, gave the following evidence :—

By Mr. Greenshields :

Q. How long have you been a cattle foreman?—A. I have been acting in the capacity of foreman in charge of cattle since 1878, and I have crossed on steamers belonging to the different lines, as well as on tramp steamers.

Q. How are the cattle treated on board ship?—A. They are better treated than the intermediate passengers are.

Q. Is there any cruelty practised on the animals?—A. None whatever. They are bedded every morning and fed twice a day. The only difficulty is that sometimes we do not get enough of water. That is all we have to complain of as far as the cattle are concerned.

Q. The cattle are not punished and abused to make them stand on their feet?—A. No, sir; they lie down whenever they please and rest splendidly on the voyage.

Q. Would there be any object in making them stand on their feet?—A. No object whatever, except during feeding time.

By Mr. Smith :

Q. Are the animals inclined to lie down on board ship?—A. Yes; after they eat they generally lie down.

Q. You say you find difficulty in getting plenty of fresh water?—A. Yes, sir; on some boats.

Q. On which boats?—A. The greatest difficulty is on the Allan boats. There is a better supply of water on the other boats, and the best boats sailing from here on which to get water are what are called the tramps. I had 630 head of cattle on the last boat that I crossed on, and the cattle had all the water that they required, and then they could wash down the decks afterwards with fresh water. It took us eighteen days to go across, and then the ship landed 600 tons of fresh water on her arrival. That vessel had fresh water ballast.

Q. What do you think is the cause of the scarcity of water on the Allan lines?—A. I suppose it is because it costs too much money to condense it.

Q. Did you represent to the head office in Montreal or in Liverpool that you were short of water on the Allan line?—A. We are not recognized at the office, but we complain to the captains.

Q. On what boat do you complain that there was not sufficient water?—A. On the "Norwegian." We do not go near the head officers of the steamer, because they would not listen to us, but we complain to the owners, and let them go and make a complaint to the offices. I complained to the captain of this steamer, when he put me on two and a-half pails of water instead of twelve gallons. We had empty barrels on the ship, but they would not fill them for us. That was Captain Carruthers, a very good man in every way, shape and form, except that he could not give us enough water.

Q. Was two and a half pails of water too little for each animal?—A. It was not enough to moisten their tongues with.

Q. If an animal got seriously maimed on the voyage would you kill it to prevent it from suffering?—A. I generally reported to the captain, and then he does what he likes.

Q. What is usually done?—A. I am twelve years in the trade, and during that time I have only lost a few head of cattle. The last shipment I made I lost the most ever I did. I believe I only lost 25 head of cattle, and I do not believe I ever had an animal that got a broken leg or a broken back.

Q. How are the underhands in charge of the cattle on board the ship, fed?—A. In fact I have fed my own dog better than these men are fed on board ship.

Q. Where do the men sleep?—A. Sometimes they sleep on top of the hatches, sometimes they sleep in the alleyways, and sometimes in the hold. In fact, wherever they can put their heads to rest.

Q. As a rule there is no place fitted up for them?—A. Coming back there generally is a place, but not very often when they are going over with cattle. The men will not go to the bunks, because they are put up in such a dirty, filthy way. The bunks are fitted up in such a part of the ship that nobody would go to them, even though they were the biggest "bummers and tramps" in the country.

Q. They would prefer to lie on the hay and straw?—A. Yes; they are in danger of losing their health if they sleep in the bunks. I have known a case in my own experience across the ocean, where men got their death of cold on the voyage and died in Liverpool, away from their homes. There was a young fellow some years ago went on the "Texas," of the Dominion Line. He had to lie in his wet clothes, and when he got to Liverpool he went to the hospital and died there. There was another man named Pat. Hanly, who, after making a trip across the water, came back here and died.

Q. Do they sometimes land the cattle men at Quebec instead of bringing them back to Montreal?—A. Yes; and some of them have to walk back to Montreal. The Allan Line is the only line that does that. I know some of the men who had to walk from Philadelphia to Montreal.

Q. How are you paid to take charge of the cattle?—A. We are paid so much a trip.

Q. Do you hire the cattle men?—A. No; the shipper hires them and the agent pays them on the other side.

Q. You do not get a bulk sum for taking over the cattle, and then hire the men as cheaply as you can?—A. No, sir.

Q. You do not make a profit out of hiring the men?—A. No, sir; I have only my salary going across, and my object is to get as good men as I can. I carry a letter stating that the agent is to pay each man so much, and when we get there there is a letter of advice ahead of us.

Q. Did you ever sign the ship's articles?—A. No, sir; nor I do not want to. We are bad enough at present without signing the ship's articles.

Q. Would it not make your position better on board ship?—A. It would not make the position of the foreman any better, but it might make the position of the undermen better.

Q. You think the undermen should be put upon the articles?—A. Yes, sir; and then if a man did not do his work, we could go to the captain and get him changed for some other work. There are some men better hands at shovelling coal than feeding cattle.

Q. You would not like to sign the articles yourself?—A. No, sir; I can attend better to my business without signing them. The captain of the ship looks down on us people as nobodies. He does not interfere with our business going over to England, but coming back we have a chalk line on the ship and cannot pass it. If we sign the articles every Tom, Dick and Harry on board the ship, down to the scullery man who peels "spuds" for the cook, would be our superior. Therefore, I think we have a right to have a little protection. I remember the last trip I made

on the Allan Line, they sent me from London to Liverpool to come home, and they gave me a form of a pass which they said was an intermediate pass, but when I got on board ship they put me with the steerage passengers. The foremen are entitled to intermediate accommodation. There are some of these ships on which the accommodation for foremen is not fit for them. On the "Pomeranian" they put us in a place which was so filthy and wet that it was dangerous for a man's life to be there.

This concluded the evidence of the witness.

JOHN C. MURRAY, of the City of Montreal, foreman for John Lee & Sons, who are engaged in fitting up accommodation for the cattle on board the steamers, gave the following evidence:—

By Mr. Greenshields:

Q. Your firm erects the cattle sheds on board the steamers?—A. Yes; for a number of years we have been fitting up the accommodation for the cattle on most of the steamers.

Q. Suppose that a vessel of ordinary size, carrying, say, 600 head of cattle, fitted up with 2 feet 8 inches space for each animal for the Canadian trade in summer, wanted to change the fittings to 2 feet 6 inches to suit the American trade in winter, what would it cost to change these fittings?—A. About 7 or 10 cents for each animal, which would be about \$45 or \$50 for a steamer?

Q. That would be all the expense she would require during the season she was running from the States?—A. Exactly.

By Mr. Smith:

Q. What is the usual standard of space allowed for the cattle?—A. Two feet 6 inches.

Q. And it would only cost about \$45 to change these fittings?—A. That is all.

By Mr. Allan:

Q. You are generally down on the wharf when the ships are being loaded?—A. Yes.

Q. Do you know anything about the class of men that are engaged to take charge of these cattle going across the Atlantic?—A. Some of them are a very poor class and some very good.

Q. Do you fit up sleeping accommodation for them?—A. We do on those ships that provide accommodation for them.

Q. Is the accommodation sufficiently good for the men to sleep in?—A. Yes; but they are made roughly.

By Mr. Greenshields:

Q. They are made the same as the cattle stalls?—A. Yes; when they are fitted up between decks. The Beaver line and the Hansa line have very comfortable rooms for the cattlemen.

By Mr. Allan:

Q. Do you think that a great many of these men improve the rooms?—A. Well, some of them do not.

Q. Do you think that any luxuries would rather be thrown away on them?—A. I really think so with some of the men I have seen go over, but, as I said, there are a great many good men go over too.

MR. CUNNINGHAM.—Do you think the rooms you build would improve the character of the men?—A. I should not think it would improve them very much.

Q. Do you think that if there were better rooms and better accommodation we would probably get better men?—A. I think so.

Mr. CAMPBELL, of the Beaver Line.—Do you know that on many occasions they engage the men at the last moment when the steamer is going away?—A. I believe they do, if some of the men do not turn up who are engaged to go on the voyage.

By Mr. Greenshields :

Q. You build the bunks for the men in the same way and out of the same material as you build the cattle sheds?—A. Yes ; on some boats we put in a better class. In some cases they are built alongside the cattle stalls.

Mr. CAMPBELL.—Is that the way which they are built on the regular liners?—A. No, sir.

Q. You are referring to the transient vessels which have no accommodation for the men?—A. Yes.

By Mr. Greenshields :

Q. Have not some of the transient vessels as good accommodation for the cattle-men as some of the liners?—A. Some of them have much better accommodation.

Mr. CAMPBELL.—Are not some of those stalls which you build for the cattle nearly as watertight as they can be?—A. They are almost perfectly watertight on the roof, but the bulwarks are not watertight. There is always a seam between each board.

Q. In your experience and from your information do you think the cattle suffer much from spray?—A. No. I crossed from New Yew York in a cattle boat in February, which carried cattle on the deck ; she was fitted up with 2-inch planks and cross beams with wooden stanchions, and the cattle seemed to be pretty well off. That was on the steamer "Lake Nepigon," the smallest steamer of the Beaver Line, and she landed her cattle all safely and did not lose one.

Q. What space had the cattle?—A. Two feet 6 inches.

Q. The stalls were all standing on the upper deck when you got to England?—A. Yes ; and we met with some heavy weather and had to run away from it.

This concluded the evidence of the witness.

WILLIAM F. COCHRANE, manager of the Cochrane Cattle Ranche, Alberta, N.W.T., gave the following evidence :—

By Mr. Smith :

Q. How many head of cattle have you on your ranche?—A. Twelve thousand five hundred head of stock.

Q. Have you been across in a cattle vessel?—A. Yes, sir ; I went across in the "Corean," the voyage previous to that on which her cattle were detained on suspicion.

Q. Have you any opinion to give us about the manner in which the export cattle trade should be conducted?—A. When I made that voyage on the "Corean," everything was satisfactory for the cattle on board. They did not seem to be crowded, and I have seen them all lie down at once. They seemed to be just as they would be in their own barns, and I should suppose perhaps they were more comfortable than they would be on the ranche during winter.

Q. Were they "stockers" or fat cattle?—A. They were fat cattle. I cannot say whether each animal was allowed to 2 feet 6 inches, as Mr. Bickerdike arranged that part of the business for us, but I think the space allowed was 2 feet 6 inches. We were very well treated so far as water was concerned, as far as I could see, but some of the men told me that the cattle did not always get enough of water. The tanks with the condensed water were so filled that the water was always given to us when it was cold. I tasted the water myself and I found it very good, and I would not hesitate to drink it if I needed it. I understood from the men in charge that the water was not hot when given to the cattle.

Q. Do you know how the cattlemen were treated?—A. I did not go very closely into that, but I heard no complaints from the cattlemen. I believe the foreman had

rooms in the intermediate compartment. The payment of the foreman was arranged by Mr. Bickerdike, and I believe they were paid so much for the lot. It was arranged here beforehand how much each of the cattle attendants should get, and they were paid by the consignee on the other side.

Q. The men were independent of the foreman so far as their pay was concerned?—A. Yes, sir, the foreman went with them to the office and reported as to how they performed their work on the voyage. I think that if there were not steam fans on board a vessel the animals would suffer very much, and especially would this be the case with ranche cattle. They are quite different from domestic cattle and they need more air and are more restive under restraint. I made the voyage in October, and I found that the cattle on the upper deck were best off.

Q. You think there is no objection to taking cattle on the upper deck?—A. I see no objection. If the fittings could be made safe, I would prefer having the cattle on the upper deck. If the hatches were closed, the animals below would suffer if there were not steam fans on board. The cattle found it warm enough as it was with the hatches open, and if they had been closed down they would have found it much too warm. We took over 477 cattle on that boat and lost only three.

Q. What did those three animals die from?—A. I could not see any apparent cause for the death of the animals, as they were lying down and feeding regularly; they might have been hurt on the railway journey or have taken their confinement to heart and died. These ranche cattle are not accustomed to being confined in stalls, and the reason I have given is the only one that would account for their death. After awhile they seemed to take their confinement well enough, and did not fight each other while they were feeding as domestic cattle do. The third animal which died would not lie down because of fright until it stood so long that it fell down and knocked two others down on top of it and got smothered.

Q. Was that the only animal that would not lie down?—A. Yes.

Q. Do you not think if they had more space this would not have occurred?—A. I do not think so. They would have to have a great deal of space to prevent that. I would like now to make a suggestion with regard to the unloading of cattle when they arrive in England. It is the custom, I believe, of the shoremen on the other side to come on board and handle the cattle as soon as the boat is docked and the cattlemen when they arrive on the other side have nothing further to do with the animals. It would be much better to have the men in charge of the animals on the boat if they are competent, turn them over to the shoremen at the gangway. I do not know that it makes much difference with domestic cattle, but it makes a great deal of difference with ranche cattle, and the men we sent over with them are more competent to handle them than the shoremen.

Q. Are the other men afraid of them?—A. They are afraid of them and take chances with them they should not.

Q. Do the animals break loose when they get on shore?—A. In many cases the men cut the ropes off in order to do the work quicker, and it takes a great deal of trouble to get the ropes on again, and it does a great deal of harm to the animals. The last time we brought over cattle, I asked the captain to try and arrange that our men should take the cattle to the gangway, and they were properly taken on shore. I believe the rule is that the foremen have charge of the cargo once the vessel comes to the dock, but I think they were satisfied in this instance that they need not care to have much to do with the ranche cattle. The first time the shoremen took charge of the cattle it took them two days to get them off the ship, but when our men took charge of them, they were tied up at noon of the morning they were unloaded.

Q. Could it not be so arranged that your own men would take charge of the cattle instead of handing them over to the shoremen?—A. I understood there is some kind of a Trades-Union by which the shoremen do all this work.

Q. Do you think electricity would be an improvement on cattle ships?—A. It might be, but I do not know that it would be at all necessary, I think the light was

sufficient on the ship I went over in. I am not prepared to say that electric light would not be an advantage, but so far as I saw there would be no necessity for it.

By Mr. Acer :

Q. What is your opinion about raising cattle in the Canadian North-West ? Do you think you can raise them there as cheaply as anywhere else ?—A. Certainly, I think we can raise them just as cheaply in the Canadian North-West as on the other side of the line, if not better. Our grass is better than on the other side. In fact I heard last year at Maple Creek, that a great many American cattle owners were thinking seriously of paying the 30 per cent. duty to bring their cattle into Canadian territory if they were allowed to do so.

By Mr. Smith :

Q. It has been stated here that cattle were worth $1\frac{1}{2}$ cents a pound more in Canada than in the United States ?—A. We have been buying cattle across the line a great deal cheaper than on our side. There are lots of buyers on our side of the line that want to get out of the business on the other side.

By Mr. Greenshields :

Q. These cattle of yours are all fed on grass ?—A. We do not feed them on anything else.

Q. And you do not know whether or not farmers' cattle are cheaper in the States than in Canada ?—A. I do not know anything about the business down here.

Q. You do not give any opinion as to whether you can feed cattle on grain in Canada as cheaply as they do in the United States ?—A. I do not know anything about that.

MR. ACER.—Q. Do you not make your cattle fat on the grass ?—A. Certainly we do.

Q. When you import cattle from the United States you have to pay 30 per cent. duty and keep them 90 days in quarantine ? This cattle business is growing in the North-West, is it not ?—A. Yes, sir ; and if this Bill to prohibit the export of cattle from Canada is passed, it would be a serious thing for us. It would not be so profitable for us to send across our dead meat as it is to send across our live cattle. I do not think we could get anything like the price for the dead meat that we do for the live cattle now.

By Mr. Greenshields :

Q. When you were in England did you see any of the American dressed beef there ?—A. Yes, sir.

Q. Was it selling cheaper than you could get for your ranche cattle exported alive ?—A. Certainly, it was a good deal cheaper. As a matter of fact, the corn-fed American dressed beef brings very much less than our cattle sent over there alive.

Q. And if you had to kill your cattle here and send them over to England they would rank along with American dressed beef ?—A. Yes. As a matter of fact, we had to kill our cattle when they landed there, because they are so wild that we could not take them out of the lairs ; but even then we got 5 per cent. more for them than they got for the American dressed beef. We sold some of our live cattle a year ago, but on account of their being so wild our experience did not justify us in doing so again. Our cattle last year were all butchered in the American lairs in England.

Q. And they paid you well ?—A. Yes ; they paid us very well. They paid us much better than if they were sent over as dressed beef. Until I went over to England this last time I always thought it was better that we should kill the cattle here and send them over as dressed beef, but I am now satisfied that that would not pay nearly so well. I would not have bought the American dressed beef myself, and paid so much for it, as I would for the fresh-killed Canadian beef. It would be a great injury to the trade if Mr. Plimsoll's Bill prohibiting the importation of live stock into England should pass.

Q. Your ranche-fed cattle killed in England brought more than the corn-fed American cattle killed here and exported as dead meat?—A. Yes; it would be a direct loss to the country if we were compelled to send our cattle over as dressed beef. My experience leads me to believe this.

This concluded the evidence of the witness.

THOS. F. JOHNS, of the City of Montreal, Cattle Dealer and Exporter, gave the following evidence:—

By Mr. Greenshields:

Q. Mr. Johns, you are a cattle exporter?—A. Yes, sir; I have been in the business for the last twelve or thirteen years. I have exported cattle from Montreal, New York, Baltimore, Boston, Portland and Halifax.

Q. Have you heard the recommendations made by the insurance companies at the Marine Underwriters' Association and by the Dominion Live Stock Association, with regard to the changes and regulations proposed in connection with the export cattle trade?—A. Yes; and with many of them I agree, and with some of them I do not agree.

By Mr. Smith:

Q. Do you think cattle should be shipped in the winter time on the upper deck of steamers?—A. I do not think there is the slightest trouble about shipping cattle on the upper deck if there are substantial fittings on board. I would recommend 2-inch planking, but I would not go so far as to say that there should be angle-iron frames, but of course the more substantial you make it the better it is.

Q. Do you think the cattle suffer from the cold on the upper deck in November?—A. No; I do not think they suffer the slightest injury from cold. A few days after the steamer gets from the land on this side the weather is very little colder than it is at any time in the summer.

Q. What recommendations have you to make on this subject?—A. With regard to the fittings of the boats which carry cattle, I would suggest that there should be a 2-foot lane always clear, so as to give the men room for working and taking care of the cattle. I think that in the early part of the season, when we have large, heavy cattle coming to Montreal for shipment, that the space should be at least 2 feet 8 by 8 feet clear, of all obstructions. If the space was to be defined by regulation for each animal I certainly would make that space 2 feet 8 inches.

Q. You think the animal is more comfortable in a space of 2 feet 8 inches than in a space of 2 feet 6?—A. There is not the slightest doubt about that. I have crossed the Atlantic fourteen times, and I speak from experience. I think that, by all means, it is worth the cost and the difference in freight if the animals have plenty of room. In case a bullock gets out of sorts, you have room to go in amongst them and fix them up all right.

Q. Do you recommend that every cattle-carrying vessel should be fitted up with steam fans?—A. I think it is very advisable in case of storms, and when the hatches are battened down. If we had the steam fans on board in such a case the animals would have sufficient ventilation. I do not say so much with regard to fitting all the vessels with electric light, because all the boats I have been on have been well supplied with lamps, and the light has been fairly good. If electricity would create any additional expense I do not think it is necessary; only, of course, it would be as well if we had it.

Q. You think it would not afford an advantage sufficient to compensate for the expense?—A. If it would be the cause of more expense to the owner of the cattle, I do not think it would. The cattle would certainly have to pay for this expense, in the end.

Q. You only object to the question of expense?—A. Yes; that is my objection. I have crossed on the "Parisian" and "Sardinian," which boats have electric light,

and it certainly was a great advantage to the passengers. I do not think that the electric light would be any positive benefit on board cattle-ships.

Q. Did you ever see the cattle ill-treated on board a cattle-ship in your experience?—A. No, sir; I never saw any cattle ill-treated on board ship. As far as my experience goes, I think they are as well treated and as well taken care of as if they were in their own stables; if anything, they were much better taken care of than some cattle in stables. The only discomfort they suffered was during a few hours of a storm. They did not suffer from sea-sickness, but then there was the difficulty of their keeping upon their feet. There is a great point in the safety of cattle going across the Atlantic, and that is to have cleats or footholds strong enough to sustain the animal. I would make a regulation that these cleats should be so fastened and so substantial that it would be almost impossible for the bullock to break them off with the working of the ship. By erecting substantial fittings for the animals there is very little danger for the cattle on either the top deck, the main deck, or any other deck. It is only during very heavy storms that accidents will occur. The cattle will work forward and backward with the rolling of the ship, and if they have got these permanent cleats to support them the cattle will learn as quickly as a man how to keep upon their feet. The cattle are well bedded and well treated, and so long as these cleats are supplied there is very little danger of losing them.

Q. Are there any ships carrying cattle that are not supplied with these cleats?—A. I believe they all have the cleats, but as a rule they are not sufficiently strong; they give way sometimes, and the moment they break the bullock is very likely to get injured. I have seen cattle injured in this way in the midst of a storm. I have seen cattle break loose, and we had to get some lumber and fix up the place and put them back again. You can turn a bullock in one of these stalls and bring him to his place again.

Q. If the bullock were about to fall, would the head rope be sufficiently strong to hold him?—A. The head ropes are not required to be so strong as I hear some people recommend. I think that a three-quarters inch rope at the outside is heavy enough. I think an inch rope is a very clumsy rope for men to handle, and the ropes want to be soft and pliable. They make a special rope for the cattle, which is soft and pliable, and I would not recommend that it should be anything more than three quarters of an inch.

Q. Have you anything to say with reference to the treatment that cattlemen receive on board these ships?—A. I have no doubt that in some cases the cattlemen have been abused. I never saw them abused, but I have no doubt that they were.

Q. On what steamers have you crossed in charge of cattle?—A. The first boat that I ever crossed on was the "Viking." Late in the fall of the year I crossed on a little boat named the "Prince Edward." She had 126 cattle on board, and we were twenty-two days out and landed our cattle in excellent condition.

Q. You were not short of food or water?—A. No; we had plenty of both, and the captain was very good and very kind. He allowed the ship to put her nose to the sea in heavy weather, and when he pulled up after the storm he was 400 miles out of his course. He nursed the cattle during the storm, and that was the cause of our long passage. I think the "Prince Edward" was one of the smallest boats that ever carried cattle out of here. She was merely a yacht, and I think her tonnage was only about 800 tons register.

Q. If the captain had not nursed the ship during the storm, I suppose you would have lost some of the cattle?—A. We would have lost them before we got out of the Gulf. I think that a great deal of the safe carriage of cattle depends on the experience and management of the captain. If the captain nurses the ship during a storm he nurses the cattle as well. I think there is fully as much in having a good captain as in having a good ship.

By Mr. Greenshields :

Q. Do you think that if there was a rule that you should only pay freight on the number of animals landed it would have the effect of making the officers of the ship

more careful?—A. It would certainly make them more careful, and there is no doubt that there probably would not be half the number lost that there is at present. I think it would be for the benefit of the steamship people to agree to such a regulation as that.

By Mr. Smith :

Q. Did the captain of the "Prince Edward" get a bonus for landing the animals in good order?—A. No; he was a very nice man, and a man that felt very much interested in the ship. He owned a quarter, or half of the ship, and for the good name of the ship he was as much interested as I was in landing the cattle in good condition.

Q. Do you think the size of the ship carrying cattle should be limited to 1,200 tons?—A. No; sir. I do not, I think that in some seasons of the year any boat can carry cattle safely across the Atlantic.

Q. What time of the year was it when you crossed in the "Prince Edward"?—A. I think it was about the 20th October. I should remark, however, that the better the boat is the less the risk.

Q. Do you think that a large boat would have an advantage over a smaller one?—A. Yes; the larger a boat is the more able she will be to contend with the heavy seas. Some of these big boats make bad spills, on account of pushing into the heavy seas in order to make good time. I shipped about 1,200 cattle this year and did not lose a bullock. I shipped by the Allan and Dominion Lines, and I was interested in some other cattle that went from New York last year.

Q. Did you find that the large vessels were any better for carrying cattle than the smaller vessel, the "Prince Edward"?—A. Of course, there is greater advantage in having your cattle on board a larger and better vessel. I am strongly in favour of having regulations made by the Government and of having these regulations strictly adhered to, and an Inspector appointed to enforce them.

Q. Do you approve of putting the cattle men on the articles of the ship?—A. I do not think it would do any harm. I have shipped considerable cattle on the Warren Line, a first-class line, and all the cattle men have to sign the articles. The cattle men were never better treated on any line than on the Warren Line. There are some boats, however, on which the men do not sign the articles; but I believe they have some law in the United States that requires them to put the men on the articles or to take them as passengers. I have also shipped men under articles on the Dominion and Allan Lines from American ports last winter, and I have shipped under articles myself once.

Q. Do you think the cattle men would be better taken care of on board if they signed the ship's articles?—A. I think that if they had any complaint then they could have recourse to the laws of the country for their protection, and that the law would back them up if they were right. I shipped under articles on the "Kansas" when I went with my own cattle on one occasion. I did this rather than pay the difference in the Cabin fare.

Q. What is the reason the cattlemen do not sign the articles of the ship here?—A. I cannot say, I am sure. I do not know whether the steamship people or the cattle men evered ask for this.

Q. You never saw any hardships which the cattle men suffered when going across?—A. On any boat I have been on they treated the cattle men well enough.

Q. And the men never complained to you?—A. They never complained to me on board ship, but I have heard some complaints on shore. I have fed with the men myself.

By Mr. Jas. Allan :

Q. You have crossed on most of the regular liners from here?—A. Yes; and I have crossed on two outsiders also.

Q. Did you see any difference between the outsiders and the regular liners?—A. On an outsider the captain would take you into his cabin if you were a foreman,

and you could sit down and eat with him and sleep in the cabin. I think there is a little better treatment in that respect on board the transient vessels. Of course, a man has to keep himself respectable.

By Mr. Greenshields :

Q. Did you ever take particular notice as to how the men were treated and what food they got ?—A. Yes ; when I have been working amongst the cattle and could not get down to the cabin to clean myself up for dinner I have dined with the men.

By Mr. Smith :

Q. How did you find the food supplied to them ?—A. I have seen a great deal better food and I have seen a great deal worse.

Q. Did you see them carry the food in a tin can ?—A. Yes.

Q. And did you see them all eating out of the can at the same time ?—A. I cannot say that I ever saw them eating out of the same can. As a rule they pick out some man to look after this food for them whenever they eat it. Sometimes their accommodation is not every desirable where they eat their food, but I was brought up in the woods and used to work in the shanties and many a time I have lived on fat pork and bread, and used to come out of the woods just as well in the spring as if I had all the luxuries in the world.

Q. Have you ever noticed any cruelties practised on the cattle on board ship ?—A. I have never seen any cruelty and I do not believe one of the statements in Mr. Plimsoll's book.

Q. You have experience in shipping cattle out of American ports as well as out of Canadian ports ?—A. Yes ; And in the American ships cattle are handled just as carefully as our own cattle. I may say that the steamship companies undertake to supply the men with dishes, plates, &c., but I think in some cases it is not done. The last time I crossed on the "Siberian" there were dishes and everything comfortable for the men on board.

Q. Are the arrangements for shipping cattle at the port of Montreal as good as the arrangements in New York or Boston ?—A. I think they are, if Mr. Kennedy's scheme to get a third track on the wharf could be carried into effect. If this is not carried out the accommodation is not so good here as at other ports. The cattle should not be driven down to the wharf at all times of the day, nor should they be put on board ship the same time as they are loading dead cargo. All that can be remedied. In Boston the facilities are better than they are here at present. The cargo is on board at the time the cattle arrive at the ship, and when they are put on board, the ship immediately proceeds to sea. The cattle in Boston get right on board from the cars. I think the cattle should be rested in the yard before they are put on board ship. In Boston they have a very good arrangement. The stock yards are about five miles out and the animals are rested there, and then they are brought down on the cars alongside the steamer just as she is ready for sea.

Q. So that the animals do not suffer from the hot weather and from being driven through the streets of the city ?—A. No ; there is nothing of that kind there.

Q. How long does it take to load a boat there with five or six hundred head of cattle ?—A. Not more than two or three hours.

Q. How long does it take you to load a boat here ?—A. It is quite different here. Generally, in Boston, one man owns all the cattle that are on the ship, while here three or four men may own different lots in the cargo. In the port of Montreal the cattle of different owners are all mixed up on the wharf, and there is great trouble in selecting them and getting them on board ship. As against that, I have often seen a steamer loaded very quickly with cattle here. When we are loading in Montreal one shipper tries to get ahead of another, so as to get a better place on the boat. This causes a rush, and a great deal of confusion ensues.

Q. Is it not all settled before you bring the cattle down what particular space you will have ?—A. No, sir ; you will have to take it first come first served. I admit that I often tried to get the best place myself.

Q. What place on the ship would you try to get in October?—A. I would try to get on the main deck because there is less insurance there.

Q. MR. CUNNINGHAM.—Is it not a fact that that the space on some of the regular line boats is over rented, and that this is the cause of the exporters being anxious to get their stock down first, so as not to get left?—A. There have been cases of that kind.

Q. What is the cause of these boats being over rented?—A. The steamship agent engages to procure the cattle, and I suppose sometimes he is short a few cattle, and he orders a few from the country, so that they make a rush to get them down. Nobody wants to get his cattle left behind and have to pay for their feeding while they are waiting for another steamer. I have been left myself on the Dominion boats once or twice. Sometimes when they order more cattle down than they can carry, my feed bill and everything else has been paid on account of the delay. I may say in connection with the matters that have been recommended, that I do not believe in putting more hay on the top deck than is sufficient for the animals until they get into the Gulf. I think it is quite safe to put hay on the top deck, down as far as the Gulf.

By Mr. Cunningham :

Q. Does it not weaken the stalls to put too much hay on top of them?—A. There is no doubt that large quantities of hay make the stalls more top-heavy. I may say also that I do not care much about the system of loading cattle on lighters in New York. They are all dumped on board these lighters when they are being taken to the ship, something like the picture in Mr. Plimsoll's book, but not so bad.

Q. Do you think the facilities for loading cattle in the American ports are better than the facilities in Montreal?—A. I do.

MR. ACER.—I think that Mr. Johns will say that cattle that come down to the Montreal wharf on the railway cars are just as well treated as any cattle on the continent.—A. Certainly, the difficulty here has been that cattle are loaded at all times of the day and left standing on the wharf while the vessel is taking other cargo. If the cattle could be driven quietly from the yards there would be no danger, except to the distillery and stall-fed cattle. Of course, the cattle will get no more punishment in being driven down to the wharf if the streets are not crowded than if they were being driven to their own stables. They should be loaded on the ship any time between 3 o'clock and 8 o'clock in the morning, and if that could be done the evil would be greatly lessened. I do not see why it could not be arranged that cattle could be shipped between 3 o'clock and 8 o'clock in the morning. At present the cattle are loaded from 3 in the morning until 12 at night. There is not an hour in the night or day when they are not being loaded at this port, sometimes; and driving the cattle down during the day time, when there is a great deal of traffic on the wharf, is very injurious to them.

Q. It would appear that arrangements could not be made, or were not made to take the cattle on board at the proper time?—A. That has been the trouble all through here. I have brought cattle here myself, and I would not have them in the yards an hour before they would have to go to the boat, no matter what time of the day it was; because, if they were not sent down, probably the boat would not wait for them.

Q. Would the boat not be willing to let you ship your cattle in the evening, after the traffic was over?—A. Sometimes the boat wanted to get out of here in a hurry. I saw cases in which the cattle owners were as much to blame as these steamship people for these difficulties in loading at the port of Montreal.

MR. ACER.—Perhaps, when they wanted to get the best space?—A. Yes; there is a great deal in that. There are a great many cattle exporter who live in the West, and when they come down here they want to get home the same night. Their cattle comes to Montreal at 9 or 10 in the morning, and they want to get them on board, so that they may be able to return to their homes again.

Mr. GREENSHIELDS.—Is not the hurrying of the cattle down to the boat due to the fact that the cattle owners are afraid that they may have some of their cattle left when the steamer sails?—A. In some cases that is true.

Mr. KENNEDY.—How often have you been left?—A. Not very often; I think once or twice.

Q. Do you know of any man engaging space on the boat and not filling it?—A. I do.

Q. And what happened to the cattle owners who did this?—A. Nothing.

Q. How would it be in Baltimore?—A. I think a man would have to fill the space.

Q. And do you not think there is some hardship to the steamship people in this?—A. The hardship is pretty evenly balanced between the steamship companies and the cattle owners. The cattle owners are disappointed in getting space about as much as the steamship people are disappointed in not having their space filled.

Mr. KENNEDY.—I can name fourteen cases in which the boat has not been filled by the best men in the trade after they contracted for the space on the steamer. On the other hand, if the steamer is not able to take the cattle the companies pay for the feeding of the cattle while they are delayed.

Mr. JOHNS.—I have seen the steamship people go out and buy cattle that were not fit to ship in order to fill up the space.

Q. Did the men who took the space from the steamer and who did not fill it do that?—A. I think not.

By Mr. Allan.

Q. In your experience in crossing from this port, did you ever have any difficulty in getting a sufficient supply of water of good quality for your cattle?—A. I have never had any trouble about water for the animals.

Q. And you have always had a sufficient quantity of it?—A. Yes; as a rule they condense the water at night and it is cool in the morning. They give us fresh water until a day outside the Gulf, and in some cases we have fresh water all the way over. I have known them to fill the barrels with fresh water before they got to the salt water; in order to give us fresh water as long as they could. The usual plan is to condense in the morning the water that they use in the evening, and to condense during the night the water used in the morning. I have never had any trouble in getting water.

Q. Do you not think the accommodation for the men is fairly satisfactory on the whole?—A. No; I think there should be better accommodation.

Q. In what way?—A. I think they should get better sleeping quarters than they do now, and the men should have a better place to take their meals in.

Q. Is it not a fact that a great many of the men prefer to sleep among the cattle?—A. I do not think they prefer to sleep among the cattle, but there is a great many of them if they had better food would rather sleep on the hay. Of course, I have seen better food provided for them, and I have seen them sleep on the hay when they could have had a bed. I think the men should be well taken care of and a better class of men engaged to look after the cattle. We have a lot of good men now sailing from this port, as good as out of any port in the world, but if there were better accommodation I think you would see better men. I think the men should be well paid and well fed.

Mr. SMITH.—Do you think that the men should be paid by the foremen?—A. I have paid the foreman and he has paid the men.

Q. You knew what the men were to get?—A. Yes; there may have been some cases where the men were robbed, but I do not think these cases are numerous. There is no doubt, however, that there have been abuses in this matter.

This concluded the evidence of the witness.

JOHN J. RYAN, of Lennoxville, Province of Quebec, cattle exporter, gave the following evidence :—

By Mr. Greenshields :

Q. Mr. Ryan, what have you got to say about the cattle export trade?—A. I have crossed in charge of cattle about ten times, and I quite agree with what Mr. Johns, the last witness, said in most instances.

By Mr. Smith :

Q. Did you ever see cattle cruelly treated on board ship?—A. No ; they are well treated. They are well taken care of, and I have crossed in charge of cattle myself. The cattle should have sufficient space on board the vessel so as to give the men plenty of room to feed them, and the fittings for them on the upper deck should be strong. I think for heavy cattle the space should be 2 feet 8 inches.

Q. If there were a fixed rule defining the space for each animal, would you make that space 2 feet 8 inches?—A. Well, 2 feet 6 inches would do for "stockers." But if the cattle were heavy the space should be 2 feet 8 inches.

Q. What kind of cattle would you put in the space of 2 feet 6 inches?—A. It would do for "stockers." If the space was 2 feet 8 inches for heavy cattle, five "stockers" could be put in the place of four fat cattle.

Q. Do you recommend steam fans for ventilation?—A. Yes ; I do. I think they are needed on every ship, but I do not think electric light is so necessary. It would be too expensive, and would likely result in increasing the freight.

Q. Would it not be an assistance to the men in handling the cattle if the ship were lighted by electricity?—A. I do not think it would assist them very much.

Q. You employ foremen, do you?—A. Yes.

Q. Do you employ the underhands?—A. Sometimes I employ the underhands and sometimes the foreman appoints them.

Q. Do you pay the men yourself or does the foreman pay them?—A. Sometimes I pay the men, and sometimes the foreman pays them. Sometimes I make an agreement with the foremen to take charge of the cattle and he employs his own help.

Q. Does he employ the cheapest men he can get?—A. I do not think so. It is not the cheapest men that are always the best.

Q. Are the cattle men well taken care of on board ship?—A. On the ships I crossed on I did not see anything wrong.

By Mr. Allan :

Q. Did you have any complaints from the men?—A. I did have complaints last summer as far as the accommodation for sleeping was concerned. They did not have proper berths to sleep in.

By Mr. Smith :

Q. Did they complain to you?—A. Yes.

Q. Did you report the complaint to the steamship company?—A. I did not.

Q. What vessel was the complaint about?—A. I think it was the "Norwegian." I shipped in every steamer of the Allan line last year.

Q. How did you get on for water on board?—A. I did not hear any complaints.

Q. There was plenty of water for the cattle on board ship?—A. Yes ; and the quality seemed to be good.

By Mr. Allan :

Q. It is not a fact that it is the general custom here to farm out to the foremen the taking over of the cattle and the hiring of the assistants? You pay the foreman so much and he takes his own assistants and pays them what he pleases?—A. Sometimes that is done.

Q. Is it not the general custom?—A. I have not always done it.

Q. Well, is it not the general custom from what you know of the trade?—A. I cannot say that, sir.

Q. Is it your impression that it is the general custom or not?—A. Some follow that plan and some do not.

By Mr. Smith :

Q. Do you think you are apt to get inferior men to take charge of the cattle if you place their appointment in the hands of the foremen?—A. My experience is that if you employ a good foreman he generally hires good men.

Q. Do you think the cattle should be taken on the upper deck in the fall?—A. It depends upon how late it is in the year. I think it would be perfectly safe if they had strong fittings on the steamer.

Q. Do you think there would be any risk in taking them across on the upper deck in November?—A. I do not think there would. I have crossed in November and the cattle landed from the upper deck were all in good condition. I would recommend that the steamers should have all their cargo on board before they commence loading cattle. It causes great confusion if the cattle are all sent down to the ship at the one time, and there is a good deal of injury caused to the cattle by carts driving through them.

This concluded the evidence of the witness.

MICHAEL GREEN, of the City of Montreal, Cattle Exporter, gave the following evidence:—

In reply to Mr. Smith :

I heard the recommendation of the Board of Underwriters and of the Dominion Live Stock Association, and I fully agree with those recommendations. I also agree with Mr. Frankland's remarks in reference to the accommodation for the cattle on the wharf, and, as to the defects in the present manner of loading them on board the steamers. I should also say that the fittings to accommodate the cattle on the upper decks of the steamers should be of the very strongest kind.

Q. Do you think electricity is necessary on board a cattle ship?—A. For my part I would not say that I consider it quite necessary. But I should think it would be a vast improvement if every cattle boat were fitted up with electricity.

Q. Do you think it would be a very serious matter of expense if cattle ships put up the electric light?—A. As to the expense I cannot speak, and I am sure that none of the cattle exporters are in favour of putting the steamship companies to any expense which is not absolutely necessary to put the ships in good condition for the trade. I think the electric light is an improvement that will come sooner or later, and the steamship owners might as well adopt it now as at any other time.

Q. Are you in favour of making it a Government regulation that all vessels carrying cattle should be fitted up with electricity?—A. I cannot say that I am in favour of that, but it would be a vast improvement to the trade if these steamers had the electric light, and I do not suppose it would be very expensive. I have not had much experience of crossing in a cattle boat, but I know that when a boat is rolling in heavy weather it is not very safe for the men to go amongst the cattle in the dark. A man is greatly hampered going between the decks of a vessel if he has to carry a lamp in one hand and has only one hand free to attend to the cattle.

Q. That means, I suppose, that you would recommend the electric light?—A. I would strongly recommend it, if it is not too expensive. I do not know how the cattle men are treated on board ship from my personal experience, but I have often heard complaints about their treatment. I crossed on a cattle boat from Boston some years ago, and the cattle were as well attended to as it was possible to attend to them. I do not know that I can suggest any improvement to the trade other than those which have been fully set forth, in the recommendations made to the Government,

and in the statements made by the different witnesses here. I do not quite agree with Mr. Frankland when he says that cattle should not be shipped to England after the first of November.

Q. I suppose you consider that cattle may be shipped up to the end of navigation on the St. Lawrence?—A. Yes; they could be shipped with safety up to the end of St. Lawrence navigation if the recommendations of the Board of Underwriters were carried out and if the fittings on the upper deck were made substantial.

Q. Do you think that the cattle suffer from the cold on the upper deck?—A. They would not suffer so much from the cold as they would from being wet. Cattle can be kept warm even on the spar deck by plenty of bedding and feeding. The cold will not affect them in the least. As long as the cattle are kept dry and have a dry bed to lie on there is no danger of their being cold.

By Mr. Cunningham :

Q. Whether do you think the exporter or the shipping company should employ the men to attend to the cattle?—A. I do not think that many of the steamship companies would agree to undertake the hiring of the cattlemen, but whether they would or not, I would not be in favor of it, because I think the exporters are the best judges of what men they should send to look after their cattle. The steamship companies have enough to do to employ their own men, and the cattle owner is a better judge of the men he requires to look after his stock than they would be.

MR. SMITH.—I think the cattle men all agree on that.

MR. GREENSHIELDS.—What do you pay your foreman as a rule?—A. That varies according to the responsibility they undertake and what I consider they are worth. I have paid men as high as \$100, and some as low as \$10. I have paid underhands as high as \$40 a trip and from that all the way down to \$10.

Q. Do you employ your underhands yourself?—A. Yes, sir; I employ them in all cases, and I pay them myself. There have been one or two isolated cases where I shipped twenty or thirty head of cattle, and it would not pay me to send a foreman in charge of this small lot. I placed them under the care of another foreman on board the ship who looked after them. Of course, when I ship a cargo of cattle I employ my own men and my own foremen to look after them.

Q. What do you recommend as to the space which should be allowed to each animal on board ship?—A. I am in favour of each animal being allowed a space of two feet eight inches.

Q. Are you in favour of having the feed for the cattle loaded on the top of the cattle pens?—A. I am not, sir. I witnessed a case in the Port of Montreal, a short time ago, where there was a lot of feed put on top of the pen, and before the boat left the wharf the weight of the feed broke the cattle pens down and about forty or fifty sheep fell into the river and were drowned. That was right opposite the wharf and before the boat left the river.

MR. GREENSHIELDS.—It has been recommended at this enquiry that a Government inspector should be appointed to look after this cattle trade at the port. Would you be in favour of having the duties of the inspector laid down by the Government or would you leave it to a large extent to his discretion?—A. An inspector is of no use at all, if anything is left to his discretion. The regulations must be laid before him in full, so that everyone should know what he is to do, and the inspector will have very little trouble in carrying it out. He will have great difficulty in discharging his duties if anything is left to his discretion.

Q. Have you seen any cruelty in connection with the cattle you shipped?—A. None, except what I have seen on the wharf, and when the cattle have been driven down to the ship. I never was across with cattle from the port of Montréal, but if they were cruelly treated on the voyage it would be reported to me from England.

Q. Did you ever hear of any cruelty to the animals on board ship?—A. No; I never heard of any.

This concluded the evidence of the witness.

Captain HOWARD, Harbour Master of the Port of Montreal, gave the following evidence:—

By Mr. Smith:

Q. Captain Howard, would you give us your views as to the shipment of cattle at the wharves of the port of Montreal?—A. I have read most of the evidence given here, and I heard a good deal of it. I heard Mr. Kennedy's recommendation with reference to there being a third railway track on the wharf for the accommodation of the cattle trade, and if that could be carried out it would no doubt answer a very good purpose. It occurs to me, from the evidence given by Mr. Johns, that if matters were properly arranged there would not be much difficulty to accommodate the cattle on the wharf, because the whole trouble seems to be the want of a proper understanding between the shipping agents and the cattle-owners. Mr. Johns admitted clearly and frankly that a great evil was, that every cattle-owner wanted to get his cattle on board ship first. The spaces are not allotted to the different cattle shippers beforehand, and each tries to get on first, to get the best place he can on board ship. Mr. Kennedy knows as well as I do, that the cattle are started down from the stock yards when it is impossible to ship them. I have come down here when a cattle ship was being loaded, and I have seen these large trucks of the Shedden Company, and the railway companies, which take about 25 feet to turn round, ploughing through the cattle on the wharves. This causes great confusion, and I should think it injures the cattle very much. Last fall the deputy harbour master was near being killed by these cattle on the wharf. His waggon was smashed up by them, and he had a very narrow escape. That all arises from want of system in the loading of the cattle. If these cattle were telephoned for to the stock yards, and if they were not allowed to come down until they were ordered, each lot of cattle could come along quietly without crowding, but when all the lots are rushed down together, they get on top of the piles of rails, and scrap iron, and amongst the waggons, and then there is the mischief to pay. It is not the fault of the wharf or the ship, but it is the fault of the cattle-owners, bringing them down before the ship is ready to take them.

Q. Could not the steamship people arrange a plan with the cattle-owners, by which they would say; A certain portion of the deck is allotted to you, and you will load on that?—A. Certainly, they should have a regular programme, and if this space were allotted beforehand there would be no necessity for their running the cattle down all at the same time. The cattle owners come here from the West in the morning, and they want to hurry up and get back to Toronto that night. They say to Captain Barclay, of the Allan Line, or to Captain Read, of the Dominion Line, "Like a good fellow, come down and let me get my cattle on board, as I want to hurry home." Mr. Barclay, of course, wants to be civil to these men, and he tries to meet their views, and lets them run down their cattle to the steamer in a hurry. I know a good deal about the cattle business, as I was the first to bring cattle down here to Montreal, and I know that it injures heavy distillery cattle to drive them down to the wharf and in the midst of all this confusion on a hot day. I have seen a lot of cattle come down just as the canal bridge was opened, and they would have to wait there for about 20 minutes, when another lot would come down on top of them, and cause great confusion. This is all the result of a want of system. There should be some man with power to stop the second lot of cattle coming down until the other cattle get across the bridge and are near the ship. It would be well to have a special cattle track on the wharf, if we had plenty of room. But we have not got the room at present. I hope I shall live to see the harbour improvements carried out, and then we will have double tracks on the wharf and plenty of accommodation for the trade. In the meantime, if any of the property which the steamships have now is taken from them to accommodate the cattle trade it would be robbing Peter to pay Paul; for you would have to take away the ground from them, which they badly require for their other cargo. Mr. Kennedy seems to misapprehend the case altogether. I have a very high opinion of him, but he

makes a mistake when he says we can run a third track along the wharf. We can put tracks at the lower end of the wharf, but if the cattle are shipped from there you will have to drive them as far from this end of the wharf, to the lower end of the wharf, as you now have to drive them from the yard at Point St. Charles to the present place of shipment. I believe that the cattle must go to the ship, and not the ship to the cattle. I have spoken to Mr. Kennedy relative to a system similar to that in New York, by which they carry the cattle in lighters to a steamer, and I think there would be no difficulty in shipping cattle here if this were done. A tug could very easily tow these lighters up against the stream. The lighter could go alongside the ship and the cattle be put directly on board. In New York, if the lighter comes up to the ship and she is not ready to take them, the lighter goes back, and the ship has to pay for the trip of the lighter the next time. I made it my business to go to New York two or three different summers, and I examined the stock yards there, and the mode they had for shipping cattle.

Q. Do you think it would help matters if the steamships and the cattle-owners adopted a system by which the steamship people would give a programme to the owner of the cattle, showing where his cattle would be placed on board ship exactly? Would not this prevent the confusion in hurrying the animals down to the ship?—

A. I think it would be a great advantage. The space ought to be allotted on the steamers to the different cattle shippers—the first come first served. The first that would come would get his space marked out, and so on, until the ship was filled. They would not be afraid then of getting a bad position on board ship. I am quite sure that if this were suggested to Mr. Allan or to Mr. Torrance they would award the space in this way, and there would be no overcrowding or difficulty.

Mr. KENNEDY.—If we had three or four shippers, instead of 150, in this country, that could be done; but we have on the one ship sometimes twenty different consignments. A man who had secured space might have his cattle on the railway at Brockville when the ship was ready to commence loading, and if you are obliged to wait on him you have to keep all the other cattle back until his cattle arrived. It is impossible to follow out the system you suggest at this port, because there are too many shippers, and you could not get them in this consecutive order.

Mr. GREENSHIELDS.—If you allot space to a man, and his cattle do not arrive, you have to keep all the other animals back?—A. Yes; a man may not arrive in time with his cattle, and if he does not we have to give his space to the next man who is ready. I do not think we can remedy that.

Captain HOWARD.—I do not think the extra track on the wharf will remedy that.

Mr. KENNEDY.—Is it worth having all this trouble day after day for a want of a few rails on the wharf?

Captain HOWARD.—I make no objection to the rails, but we have no accommodation on the wharf for them. At the Dominion Line shed you have the Grand Trunk Railway track and the Canadian Pacific Railway track, and if you put in another track the Dominion Line would not have room to discharge their ships. Even now we have only a small roadway there, and a very small one it is.

Mr. KENNEDY.—I ask you, would it not be just to the cattle-owners to make them take away their dead cargo off the wharf, instead of leaving it there for a week?

Captain HOWARD.—There is no dead cargo left there for a week. The Grand Trunk Railway will bring down 100 cars at night, and they will unload and then load them and go away next evening at 6 o'clock.

Mr. KENNEDY.—Is it not a fact that cargoes are left on the wharf for days and days?

Captain HOWARD.—No; the only thing left there is salt and scrap iron, but that does not interfere with the cattle much. If you only make proper arrangements between the steamship agents and the cattle-owners with regard to bringing down the animals I guarantee you will not have much trouble.

Mr. KENNEDY.—That system of allotting space beforehand for each consignment of cattle can never be carried out.

Mr. GREEN.—If you had only one boat to load at a time you might do that, but sometimes we have four or five boats loading at the same time. With all these boats loading at the same time, and with cattle coming down to the wharf for them, they would have to come in contact with each other. For instance, there may be 500 head at the Allan's, and 500 at the Dominion sheds, and 500 more going down to Reford's, and you would have all these 1,500 cattle in a bunch blocking up everything. I have seen cattle blocked up in crowds like this, and I have seen some of them going over into the water, and in trying to prevent this we have nearly been killed ourselves.

Mr. KENNEDY.—I would like to ask if there is a place on the wharves which, during the day, is suitable to load even 100 head of cattle?

Captain HOWARD.—Yes; if the hundred head of cattle go down to the ship in one lot, and the ship is ready to receive them. The wharf is intended, for shipping and not for a cattle yard.

Mr. KENNEDY.—There is no room on the wharf for loading cattle, but if they are taken down in railway cars and put straight on board the ship there will be no confusion. As long as they are driven down, as they are at present, there will be sure to be confusion and trouble.

Mr. SMITH.—Do you consider it quite impracticable to put a third rail down?

Captain HOWARD.—I do, sir; with the present ground we have at our disposal. I think if we did put down a third rail it would block up the business immediately.

Q. Have you any recommendation to make as to providing accommodation for the cattle until they get these new harbour improvements?—A. There should be a proper understanding between the ship's agents and the cattle owners that the cattle should be sent down to the wharf only when required. If the steamship's agent order cattle down, and he finds afterwards he is not ready to take them on board ship, he should telephone the stock yards to hold these cattle until a certain hour.

Q. You think it is the want of arrangement between the cattle-owners and the steamship agents that causes this confusion?—A. I do.

By Mr. Greenshields:

Q. Is there any room on the wharf for the regular liners to put up even a small shed to accommodate some of the cattle and water them?—A. No.

Q. No shelter can be provided for the cattle on the wharf?—A. No; there is not room. If the cattle were watered at the stock yard they do not require water at the wharf.

Q. As a matter of fact, is not dead cargo left remaining on the wharf for weeks at a time?—A. No; the only cargo left there is salt and scrap iron, and that does not interfere with the cattle.

Q. Is not railway iron allowed to remain on the wharves for weeks at a time?—A. It is moved away in an extraordinary short time. If it were not that they can bring the railway cars down alongside the wharf they would not get it away in five times the time they do now. If the Grand Trunk Railway has a full cargo of rails the ship goes to Windmill Point and they move the whole cargo away in a few weeks. Sometimes the Grand Trunk Railway will have 8,000 or 10,000, or 12,000 tons of rails, and they must get time to take that big load away. If there are 10,000 tons of rails at Windmill Point that has nothing to do with the cattle business, as the cattle are not loaded there.

Mr. GREEN.—I have seen plenty of cattle loaded when there was any amount of scrap iron at the Allan wharf.

Q. Have you anything to do directly with the shipment of cattle? Have you ever been on board ship when they were loading cattle?—A. Yes time and time and again. Mr. Reford had one ship here that loaded a cargo of cattle from the North-West and he came to me to know what he would do with her. I got him to bring the cattle to Hochelaga, and we got a roadway made from the cars to the ship,

but it took forty-eight hours to get these North-West cattle on board, and they blocked up the whole traffic of that part of the wharf.

Mr. ACER.—What would you think if there were a Government inspector to give orders as to how and when the cattle should be loaded on board ship?—A. I think it would be a great advantage and would help to lessen the evil.

Mr. ACER.—In giving my evidence, I said that I did not think it would be much improvement to have a Government inspector, but after hearing this evidence I believe that if there were a good inspector appointed, who could not be bought, there would not be nearly so much difficulty in loading the cattle as there is now.

Q. Do you think the duties of the Government Inspector should be attached to the port warden's office, or do you consider that there should be a man appointed direct from Ottawa?

Capt. HOWARD.—There should be a man appointed direct from Ottawa, independent of everybody. He should be a competent man, independent of everybody, and only responsible to the Government.

Mr. SMITH.—Is that your view also, Mr. Acer?

Mr. ACER.—Yes.

Capt. HOWARD.—There is another thing which I wish to mention with regard to these men who go over to take care of the cattle. I have seen these fellows go on board ship, and they are a pretty tough crowd as a rule. They go down there, and some of them are actually thrown on board, as they want to do anything at all to make up their full number of men. That remark applies to a great number of these men, but not to the whole of them; there are some good men amongst them.

Mr. SMITH.—We have heard that some clergymen go across with cattle?—A. Yes; but they managed to get into the first-class cabin. Dr. Baker told me to-day that in the summer time he is bothered all the time with applications from people to go across.

Mr. KENNEDY.—You would be surprised to hear the kind of men who wish to go over in charge of cattle for sake of the free passage?

Capt. HOWARD.—I am of opinion that if these cattle men were regularly put on the ship's articles it would be a great deal better for all parties concerned. I do not think that the foremen should be put on the ship's articles, because they are a different class of men and receive good wages and know their business. I would not force the foreman if he did not like to sign the ships articles, but if you put the men on the articles you will get a better class. If you get decent men to go across it is all right. But if you get miserable fellows going on board here, and drunk until they get below Father Point, they will take their food any way they get it. If the men get proper pay I think you can get a good class of men to go across with cattle, and they should be well provided for on board ship.

Mr. SMITH.—What is your objection to the duties of the inspector being discharged by the port warden's office? The port warden is already obliged to inspect the ship as to its seaworthiness, and would not he or his deputy be able to give a certificate as to the seaworthiness of the ship for carrying cattle.

Capt. HOWARD.—I think the man who would look after the loading of the cattle should be independent of the port warden or harbour master, or anybody else. If the port Warden looks after dead cargo and the other business of the ship he has enough to attend to.

Q. Yes; but he has deputies?—A. He has no deputy to look after this cattle business. I would have a first-class, competent man, of experience in the cattle trade, and who knows all about the business, appointed. A man appointed for this position should be appointed direct by the Government at Ottawa, and he should be independent of everybody else and responsible to the Government only.

Mr. PRICE.—Have not the regular lines of steamers lately been putting up a number of new sheds on the wharf?—A. Yes; they put a up number last year.

Q. Do you not think they could afford a small space, so as to put up a cover for about 100 head of cattle?—A. They have not the space for that. The shed they put up down there was not much of an accommodation for the cattle.

Mr. GREEN.—It was good enough, as far as it went.

Mr. KENNEDY.—If they cannot make better improvements than that we do not want any.

Mr. PRICE.—I think it was a move in the right direction. I have been on the wharf myself every day shipping cattle; and I can say that some of the freight sheds, as a rule, are partly empty. Why could not they allow part of these shed for the accommodation of cattle as well as for the dead freight? This cattle trade is just of as much importance as the dead freight trade?

Capt. HOWARD.—I think so, too, and there is not a man who would do more for the comfort of the animals than I would; but they have not the accommodation on the wharves. There is nothing pains me more than to see some of those men driving cattle down to the wharf, prodding the animals with a long stick and a spike on the end of it, as if the ox was a sand bag.

Mr. PRICE.—I think if the Harbour Commissioners would say to the steamship owners, "We want so much of your shed for the cattle trade;" I think we could get more accommodation. I think it could be done, from what I know of the sheds; because I know the sheds are not always occupied. I think a portion of these sheds should be cleared when the time for loading the cattle comes along.

This concluded the evidence of the witness.

MONTREAL, January 9, 1891.

On the 9th day of January, 1891, the Enquiry was resumed before Mr. William Smith, Deputy Minister of Marine.

HENRY MACKAY, Shipping Master of the Port of Montreal gave the following evidence:—

By Mr. Smith:

Q. Have you ever shipped cattle men on the articles of the ship, Mr. Mackay?—A. Yes; I have done so. I have a list of those cattle men who have been engaged and have been so shipped this year.

Q. How many cattle men did you ship on the articles this year?—A. I shipped 420 cattle men under articles on twenty-nine ships, and mostly all of these were on transient vessels.

Q. Did you ship none under articles on the regular liners?—A. No. I now file statement showing the number of cattle men shipped under articles, and the vessels on which they were shipped.

SHIPPING OFFICE,

PORT OF MONTREAL, 6th January, 1891.

List of Ships that engaged Cattle-men during 1890.

Date.	Name of Ship.	Number Employed.
1890.		
May 12....	Vedra	7
do 19....	Michigan	9
do 31....	Ashborne	14
June 3....	Oxenholme	16
do 3....	Straits of Magellan	12
do 5....	Idaho	12
do 9....	City of Lincoln	20
do 30....	Electrique	10
July 4....	Vedra	8
do 14....	Norse King	10
do 16....	Michigan	18
do 18....	Oxenholme	16
do 21....	Straits of Magellan	14
do 24....	City of Lincoln	20
do 25....	Straits of Gibraltar	9
do 29....	Ashburne	4
Aug. 8....	Ripon City	18
do 30....	Michigan	
Sept. 1....	City of Lincoln	24
do 2....	Florida	15
do 4....	Oxenholme	15
do 10....	Sireca	13
do 11....	Straits of Magellan	15
do 16....	Straits of Gibraltar	18
do 24....	Caragena	14
Oct. 14....	Ripon City	13
do 23....	Michigan	23
do 23....	Oxenholme	14
do 31....	Straits of Magellan	15
Total, 29 ships....		420

HENRY McKAY,
Shipping Master.

Q. The charge is 50 cents each for shipping these cattle men on the articles?—
A. Yes.

Q. Do any of the captains or agents ever object to pay the fee?—A. No.

Q. Do you know the reason why the regular liners do not ship them on the articles of the ship?—A. They say they carry them as passengers.

Q. Are their names entered on the list of passengers?—A. That does not come under my control, but they are not seamen.

Q. What is the definition of a seaman in law?—A. Both the British and the Canadian law, says: "The term seaman shall include every person, except masters pilots, and apprentices duly indentured and registered, employed or engaged in any capacity on board any ship."

Q. Do you consider that the cattle men are seamen under the Act?—A. I should think so. In some cases the ship carries them as seamen and puts them on the articles. As I have mentioned before, in all 420 cattle men were shipped last year on the articles as seamen, and 595 men were discharged here from various ships. These men were on the articles of the ship. They were all cattle men. Some of the ships took them on the articles at sea. I now file the list of cattle men discharged here who are on the articles:—

SHIPPING OFFICE,

PORT OF MONTREAL, 6th January, 1891.

List of Ships that discharged Cattle men during 1890.

Date.	Name of Ship.	Number of Men.	Port at which Engaged.
1890.			
May 2...	Warwick	11	Gonrock.
do 10...	Circe	1	Glasgow.
do 27...	Toronto	21	Liverpool.
June 13...	Warwick	13	Glasgow.
do 19...	Circe	20	Gonrock.
do 26...	Lake Huron	10	Liverpool.
July 2...	Amarynthia	24	Gonrock.
do 8...	Lake Ontario	8	Liverpool.
do 10...	Alcides	9	Greenock.
do 15...	Oxenholme	3	Liverpool.
do 15...	Colina	2	On board.
do 16...	Pomeranian	11	Gonrock.
do 18...	Straits of Magellan	6	Liverpool.
do 21...	Lake Winnipeg	7	do
do 21...	Circe	14	Gonrock.
do 21...	Lake Superior	20	Liverpool.
do 29...	Storm King	12	Graves End.
do 29...	Lake Huron	11	Liverpool.
do 31...	Warwick	19	Glasgow.
do 31...	Grecian	6	At sea.
Aug. 7...	Siberian	35	Gonrock.
do 8...	Toronto	8	Liverpool.
do 13...	Lake Ontario	18	do
do 13...	Alcides	9	Glasgow.
do 19...	Colina	1	On board.
do 22...	Circe	9	Gonrock.
do 26...	Lake Superior	16	Liverpool.
do 28...	Oxenholme	6	do
do 28...	Assyrian	8	Off Dover.
Sept. 3...	Warwick	6	Garock.
do 8...	Sarmatian	20	At sea.
do 8...	Amarynthia	19	Greenock.
do 10...	Alcides	7	Gonrock.
do 10...	Lake Ontario	16	Liverpool.
do 23...	Colina	7	Gonrock.
do 24...	Circe	9	do
do 30...	Earl King	5	Graves End.
Oct. 4...	Lake Huron	13	Liverpool.
do 14...	Warwick	17	Glasgow.
do 14...	Amarynthia	3	Gonrock.
do 15...	Oxenholme	15	Liverpool.
do 16...	Lake Nepigon	8	do
do 21...	Alcides	6	Greenock.
do 23...	Lake Ontario	15	Liverpool.
do 26...	Colina	6	On board.
do 26...	Buenos Ayrean	13	Gonrock.
do 26...	Sarnia	13	Liverpool.
do 31...	Circe	4	Gonrock.
do 31...	Lake Winnipeg	4	Liverpool.
Nov. 10...	Lake Superior	12	do
do 14...	Dominion	10	do
do 14...	Warwick	8	Glasgow.
do 17...	Oregon	6	Liverpool.
do 20...	Lake Huron	4	do
do 20...	Amarynthia	11	Gonrock.
Total, 55 ships		595	

HENRY McKAY,
Shipping Master.

I may mention that the "Buenos Ayrean," shipped thirteen men before the shipping master at Liverpool.

Q. At Montreal, the regular liners do not ship them before you?—A. No.

Q. Is there any penalty for taking these men on the ship without putting them on the articles?—A. Yes; I think there is a penalty of £5 for any man so shipped at England, and \$20 fine under the Canadian law.

Q. Did you ever mention to the agents of the regular liners that the law required these men to be shipped before you?—A. Yes; I have mentioned it to all of them. That circular which was issued by the Board of Trade in 1887 would indicate that they have the privilege of entering them as passengers. The circular says: "It has come to the notice of the Board of Trade that persons are employed or engaged on steamships in the capacity known as cattle men; that in the case of certain of the steamships in which they are engaged or employed they are neither entered on the articles of agreement nor are their names inserted in the list of passengers. The master of any ship in which the conditions are not complied with, for each failure to comply with the above requirements imposes a penalty of £5, imposed by section 157 of the Merchant Shipping Act of 1854. The Board of Trade desires to call attention to the penalty incurred by neglect of the above provisions, and desires that superintendents of mercantile marine offices shall, at the time of the discharging of cargoes, call the attention of the masters to this point, and see that cattle men have been properly entered and described on the articles." The law seems to be that where they are not doing any work and are merely returning from England, they must be entered on the list of passengers or on the articles. Some ships have not the privilege of carrying passengers, and others only carry a limited number, and when that number is exhausted they have to put the cattle men on the ship's agreement.

Q. But if they do any work on board ship they are seamen?—A. Certainly.

Q. And do these men come out on the passenger list?—A. They do not. There were 595 who came out as cattle men, and were knocked off here and discharged.

Q. Were they discharged before you?—A. They are marked off as deserters, as they have to be accounted for.

Q. Do you not inquire why the cattlemen going across to do work on the ship are not put on the articles?—A. I do; but they do not put them on the articles, and I cannot enforce it.

Q. The law is clear enough. There is a penalty of £5 for each offence?—A. Yes; but the ships go away and I have no means of proving it. They take out new articles on the other side and the ship returns. It is for the authorities on the other side to look after that.

Q. You never made a test as to your power to compel them to put the cattle men on the ship's articles?—A. I never did. There were 123,000 head of cattle shipped from the port of Montreal, and with one man to take care of every twenty-five head of cattle, that would be about 5,000 men who shipped here as cattle-men.

Q. And these 5,000 men should have paid you 50 cents each if they were put on the ship's articles?—A. Yes.

Mr. ALLAN.—It might be worth while making a test case of it.

This concluded the evidence of the witness.

JAMES G. SHAW, Port Warden of the Port of Montreal, gave the following evidence:—

I have been fifteen years port warden of Montreal, and I have one assistant, called the deputy port warden.

By Mr. Smith:

Q. What is the port warden's salary?—A. The port warden's salary is \$2,000 a year, and the deputy port warden's salary is \$1,600 a year.

Q. I asked you that, because there is a proposition to have a cattle inspector appointed?—A. Yes; I approve of that, because I think it is absolutely necessary.

This officer should be appointed by the Government, and have an office of his own, entirely separate from the port warden's office. He should have no connection with the port warden's office. The port warden's office is under the Board of Trade of Montreal, and this inspector should be appointed by the Government at Ottawa.

Q. Do you think that the Board of Trade could not manage this business and supervise it, it being largely a local matter?—A. I think that as the trade concerns the whole Dominion of Canada, from Halifax to Vancouver, the Government is the proper authority to have the appointment of this officer.

Q. Do you not think it would be an advantage to have an influential body, like the Board of Trade, representing all the elements of trade here, to take charge of the supervision of the duties of this officer?—A. The Board of Trade of Montreal is a very influential body, but at the same time the whole country is concerned in this inspectorship. The cattle come from the West, and not from the city of Montreal.

Q. Do you consider that a man appointed for an office like that should possess special sea-faring or mechanical knowledge?—A. He must have mechanical knowledge, I should think.

Q. It has been suggested here that he should be an expert in the cattle business, and a sea-faring man?—A. I do not see what sea-faring has got to do with the inspection of stalls and the providing of accommodation for the cattle. Any practical man of ordinary intelligence, who knows something about the business, would make a good inspector. The seaworthiness of the ship is assured before she comes to this port, because all vessels coming to Montreal are A-1 at Lloyds.

Q. And your business is to see that the ship is not too deeply loaded?—A. The Port Warden's Act says that a vessel must not be overloaded, and when her cattle is on, and all her cargo, it is my duty to see that she is not below her mark.

Q. When the vessel is finished loading with grain the cattle come on afterwards?—A. When we are going to load a vessel, if she is a stranger to the trade I am notified that they are going to take on so many tons of phosphate, so many standards of deal, and a certain number of cattle. From our experience, we have a pretty good idea of what the weight of the cargo will be and how much it will immerse the ship. We calculate the weight of the cattle and the feed.

Q. You see that she is not too deeply laden?—A. The port warden's office looks after that.

Q. So that, even if no cattle inspector, were appointed you would see that a vessel was not too deep and that she was seaworthy, so far as her cargo is concerned?—A. We give the last certificate that the vessel is in a seaworthy condition.

Q. Do you inspect every vessel leaving the port, or only grain vessels?—A. Every vessel leaving the port of Montreal for sea is inspected by the port warden or by his deputy.

By Mr. Bond:

Q. Do I understand you to say that every vessel coming to this port is classed A-1?—A. Every vessel.

Q. What about the steamer "Oxenholme"?—A. The steamer "Oxenholme" is not classed A-1 at Lloyds, but she is as good a vessel as comes to the port of Montreal. I have to correct myself when I said that every vessel coming to Montreal is classed A-1; but the "Oxenholme" was an A-1 vessel, and is as good as any A-1 vessel today.

Mr. SMITH.—She has been reduced in her class?—A. No; but the vessel is demoralized, and being a cattle ship, she is not kept up to Lloyd's requirements.

Mr. BOND.—I merely asked that information, as I thought you were hardly correct in your statement. I should think there are other vessels coming here which are not classed A-1?—A. I think I speak correctly when I say that no vessel but an A-1 vessel would find a cargo in Montreal.

Mr. BOND.—I do not think the "Canopus" is classed A-1?—A. She has been classed, but I do not think she is classed now. Both of these vessels which have been mentioned to me have been A-1 vessels, and as far as their construction is concerned,

they are first-class vessels yet. The very fact that these vessels are insured shows that they must be received by the insurance companies as good vessels.

Mr. BOND.—We do some terribly inconsistent things at times.

Mr. SHAW.—That is your own affair. Neither of these vessels would be allowed to carry grain as A-1 vessels.

By Mr. Smith:

Q. What are the fees for inspection of vessels in the port warden's office?—A. There is nothing payable on the shipment of grain of any kind, but the general superintendence of vessels loading grain and cargo costs \$5. In addition to that there is a certificate given by the office, which costs \$1.25.

Q. What certificate is that?—A. It is a clearance certificate.

Q. Do these fees go to the Board of Trade?—A. The balance, after paying the salaries and expenses of the port warden's office, are handed to the Board of Trade, but that balance is getting smaller every year. Whenever the council of the Board of Trade sees that the receipts are higher than are absolutely necessary they reduce the expenses.

Q. Do cattle pay any fees?—A. Yes, sir; cattle and horses pay a fee of 1 cent per head and sheep and hogs a quarter of 1 cent per head.

Q. So that, last year the revenue from the cattle exported was about \$1,200?—A. Yes; but we had hardly sufficient money to carry on the office. From 1874 to last year I have returned 7,700,000 cattle shipped out of the port—1874 was the first year that the trade commenced.

Q. Is that 1 cent per head charged for the inspection of the cattle?—A. No; it is the general revenue of the office. It is not for any particular inspection.

Q. You do not inspect the space occupied by each animal, for instance?—A. No, sir. We have nothing whatever to do with the cattle on board ship, except in so far as the vessel is seaworthy.

Q. Did you give any service last year for the \$1,200 revenue from the shipment of cattle?—A. Yes; we have to calculate the free-board of the vessel, and we have to see that she is not overloaded. We have to go down at any hour of the day or night that we are called upon, and we have to see that the hay is not piled up too high on the cattle sheds, so as to prevent the officer on the bridge from seeing over the bows of the vessel.

Q. If there was an inspector appointed to look after the water, and the food, and the ventilation, and the fittings of the animals, you would be relieved of all that duty, except as to the free board of the vessel?—A. Yes.

Q. Do you think it is advisable to have so many officers appointed for the inspection of the ship? We have an inspection by the veterinary surgeon and by the port warden now. Do you think it necessary that another inspector should be appointed?—A. I think that if the veterinary surgeon has now, as he says he has, to measure the size of the stalls and the quantity of cubic yards they contain, he is perhaps the best man to say how many cattle should be carried on board the ship. I have an idea that the work would be very much simplified if he discharges those duties. Suppose there is an inspector appointed, on the arrival of the vessel into port the master or agent should furnish him with a diagram of the holds or decks on which it is proposed to carry cattle. With the position of the present ventilators on the ship marked, a model of the stalls on each deck should be made as a guide for the inspector, and the rule as to these stalls should be hard and fast, with the exception of any change that might be made on account of mooring bits, or any fixed obstruction in the hold where the cattle were to be carried. There has been a good deal of talk here about a 2 feet 6 inches space and a 2 feet 8 inches space, but I think that a ship should be allowed to carry as much cargo as she can with safety, and at all times of the year.

Q. No matter about the inconvenience or discomfort to the animals?—A. I will come to that. If 2 feet 6 inches or 2 feet 8 inches was laid down as a hard and fast rule the inspector, while doing his duty, might find that a stall was an inch short of the

width, and that stall would have to be thrown down ; whereas, by leaving it to his option he could very easily arrange that a smaller animal might be put into that.

Q. Could not that space be utilized for hay, or straw, or water, or even for the cattle men? From all accounts we have heard, the cattle men would be very glad to get that space to lie down in?—A. Yes ; that could be done.

Q. In other words, you would give the inspector discretion as between 2 feet 6 and 2 feet 8?—A. Yes ; or even down to 2 feet 4. I take it for granted that the inspector will be a man with a certain amount of common sense, and he should be given an opportunity of exercising that sense. When cattle are carried between decks you should have a fan capable of injecting so many thousand feet of air per minute. You should also have an up-take shaft of proper size to allow the foul air to escape, and, if necessary, the hatches should be battened down, so as to give the inspector an opportunity of proving how the fans work. A stated number of cubic feet of air should be allowed for each animal, and no cattle should be allowed to be carried on the bridge deck, except in special cases. A great many of the vessels coming to this port are quite able to carry cattle on the upper deck ; but in some cases, when a vessel is not built to carry a large number of cattle, on account of her showing too much seaboard, it makes the vessel a little tender.

Q. Do you think that cattle should be carried on the spar deck in the months of November and October?—A. I made one passage across in the winter time on a cattle ship, and I do not think that the cattle sustained any hardship at all. The only difficulty, I think, would be with sheep in the winter time, and I am told that when the spray freezes on their fleece they get frozen to the deck and are not able to rise. Whether that is true or not I do not know, but I think it is quite possible.

Q. You think sheep should not be carried on the upper deck?—A. Not after the 15th of October.

Q. Do they ever ship sheep late in the year?—A. Yes.

Q. And you think the cattle do not suffer any hardship on the upper deck in November?—A. I do not think so. We have carried many hundred thousand cattle across the Atlantic, and the same shedding has come back voyage after voyage unbroken. This season the weather has been exceptionally severe, and I should think that a large proportion of the cattle lost were suffocated from want of ventilation when the hatches were battened down. I consider that if these steamers had steam fans, and that the hatches were battened down, the master of a vessel could keep on his course longer than at present, and in all probability save his cattle better. If the fans were working properly the ventilation on the orlop deck would be perfect, and in a storm the cattle would come through it in better shape. Some of the hatches of vessels coming to this port are 22 feet long by 12 feet across, and are made for taking in machinery, and the hatches of some vessels are very much smaller. With the hatch open, the master of a vessel is always afraid of a sea coming on board and going down the hold.

Q. Are you a navigator?—A. I am not. I have been engaged as a ship-builder all my life before I became port warden. I consider that the deck ventilators, as at present fitted, are useless. I have seen vessels taking cattle on board at daylight in the morning, and though they are fitted up with any number of deck ventilators, and wind-sails besides, yet the air becomes very foul and very hot before the vessel sails. If a vessel is going down the river, and the wind is aft, there is very little ventilation, unless she has steam fans. One of the vessels which lost a large number of her cattle in the summer of 1888 loaded her cattle when the thermometer by the McGill College Observatory was 74 degrees, and it ran up to 81 in the course of the day. I took a thermometer down and hung it up in one of the sheds on the wharf, and it marked 119 in the sun. It was 81 in the shade, but there is no shade on our wharves outside of the sheds. I saw these cattle which were lost going on board ship, and they appeared to be well-fed fat cattle. But they suffered so much from the heat that there was a very heavy mortality before they got to Father Point. That vessel was the "Carthaginian," and a number of the cattle died on the upper deck, showing that the fans would not have been any use in that case.

By Mr. Bond :

Q. Would not the fact that the "Carthaginian" only left port at 8 in the morning contribute somewhat to that mortality?—A. I do not think so. They suffered from want of good air and from the heat. There was not enough circulation of fresh air to cool the cattle, and I believe they would have died in the sheds under similar circumstances.

Q. Are you aware that a Donaldson Line boat sailed the same morning with a load of cattle?—A. In all probability there was.

Q. She started some hours earlier and got through with a very small mortality?—A. I suppose so. I know that on that occasion there was a breakdown on the railway, and the animals were very much heated and excited when they went on board the ship. I think that was the cause of the mortality.

Mr. BOND.—If these vessels got away at day-break there would be less mortality. The heat in this port is something frightful at times, and it is very dangerous to load the cattle during a very hot day. The point is, that the fact of the ship being late in sailing contributed to the mortality.

Mr. SHAW.—I do not quite agree with you.

By Mr. Greenshields :

Q. Your view is, that the cattle would have died anyway?—A. I believe they would have died anyway. I believe that with proper regulations the trade can be carried on very successfully, and I think it will seriously injure the port if the exportation of live stock is stopped.

Q. Were not these heavy distillery cattle that died on this voyage?—A. I believe they were.

Q. Are not distillery cattle more subject to the influence of the sun than others?—A. Most certainly they are. When animals are heavy and fat like that they suffer more from the heat than grass-fed cattle. They are kept in the stables all the time, and are not allowed to run about, as store-fed cattle are.

Q. They keep them in the stables for seven or eight months.—A. I do not know as to the length of time they keep them in the stables, but their hoofs were mis-shapen as if they did not use them much. I think that the present cattle sheds on board the steamers are quite sufficient if they were strengthened a little. The covering might be improved by using two single inch boards, double—that is, one board laid on top of the other.

By Mr. Smith :

Q. Do you think that two 1-inch boards, one laid on top of the other, are better than a single 2-inch board?—A. Yes; I think they are. They are stronger, and there would be no space left between them for wet to get to the cattle. Two 1-inch boards would be much stronger than a single 2-inch board, and they would do their work better. My opinion is, that a 2-inch plank is better than a 1-inch, but that two 1-inch planks are better than one 2-inch plank. The present sheds cannot be made water-tight, and there is no use pretending that they can; for I know, from my experience as a mechanic, that they cannot. I believe, however, that no sheds would stand the heavy weather that has been experienced at sea recently.

Q. Would not permanent stalls stand the sea?—A. There are no such things as permanent stalls. They cannot be permanent if they are erected only to do service for five or six months in the year.

By Mr. Allan :

Q. Is it not a fact that during these heavy storms at sea a great many vessels got through safely without any extra constructions on the deck?—A. Yes; and the chances are they may be able to do it again. A captain cannot keep his hatches open in any kind of a rough sea, because he is afraid of a sea coming on board all the time, and he cannot handle the ship as well as if the hatches were down. He is

always afraid of a sea getting in between decks and thus losing the vessel. I consider that the present sheds are strong enough to do their duty with the alterations I have mentioned, namely, that there should be two 1-inch boards properly put together. The sheds that are erected here on board the cattle steamers by John Lee & Co., and by Pallascio, the contractors, are of as good a construction as those erected in any other port. I have no hesitation in saying that they are quite sufficient for the trade, if they are made a little stronger, and made also water-tight. A large number of ships have iron decks, and it is impossible to fasten these so-called permanent sheds on them. I would suggest, also, that there ought to be tanks for fresh water on board the steamer, or condensers sufficient to give the animals a sufficient supply of water, which might be regulated at so many gallons per day. The present water ballast tanks should be opened to inspection by the inspector, whenever he requires to see them. At present, the tanks are very often not pumped out, and there is sometimes sea water in them when the fresh water is put in. The fresh water is pumped into them between Montreal and Quebec, or sometimes a little lower down than Quebec, and on account of the admixture of sea water which remains in the tank it is bad for the cattle. I would make it a regulation that the cattle inspector should have the man-holes of the tanks open, if he wishes to inspect them. Reference has been made during the inquiry as to keeping the scuppers clear during the voyage. I think the scuppers should always be left clear, and between decks especially.

By Mr. Watt (of the Allan Steamship Co.):

Q. Mr. Shaw has entered fully into a large number of details, some of which will be proper matters for consideration when regulations come to be made. Inasmuch as Mr. Shaw has given this matter careful consideration and has long experience in the business, I would ask him if he considers that his office is incapable of inspecting the ship with regard to their cattle-carrying capacity? He has suggested that a third officer should be appointed, but I should think this would create a conflict of jurisdiction. I know that Mr. Shaw would not shirk his duty, but I ask him why he thinks the cattle inspector should be placed under the charge of the Government, instead of being connected with the port warden's office?—A. I do not attempt to shirk any duties, but the gentlemen who are largely interested in this investigation demanded that an inspector should be a sea-faring man, and one having knowledge of cattle.

By Mr. Smith:

Q. You gave your evidence that this business should be managed in Ottawa, and not in Montreal. Is there anything in the port warden's office which would prevent the inspection being controlled by it?—A. I would give in to no man in the Dominion of Canada, as far as my capability of being inspector for cattle is concerned.

Q. All the duties of the inspector which you have heard spoken of during this investigation could be done in connection with your office and under your supervision. Do you think they could? Of course, it might require more assistants, but you say you will give in to no man living as to your being able to discharge these duties?—A. I consider that I am perfectly capable of doing all that work, as it is merely mechanical. The furnishing of a diagram of the ship and of the cubic feet of air which should be allowed to each animal is a matter which could be easily inspected.

Mr. WATT.—There is no reason why animals should be exempted from the inspection by the port warden's office any more than grain?—A. No reason whatever.

Mr. WATT.—The port warden's office last year collected \$1,200 from the animals shipped from this port, and there should be some return for that. Would it not simplify matters very much if the shipmasters had only one office to go to?—A. Yes; it would. At present, the shipmaster has to deal with the Harbour Commissioner's office, the port warden's office and the agent's office. It would be better if all

the offices were concentrated under the one roof. As far as I understand from the shipmasters, they are never consulted in the matter of what cargo they are to carry or to what place they are to carry it. If a shipmaster, who had been a carpenter on board ship and had raised himself by his ability to be master of the vessel, were appointed to discharge the duties of this inspector, I do not think you could get a better man. I do not think you can get a better man to discharge the duties. There are some men in such a position, and they, having mechanical as well as sea-faring knowledge, will be the best men for the position. As far as I have seen, I think that this whole question comes down to providing sufficient ventilation for the cattle between decks. Every vessel carrying cattle should have steam fans on board, and if this were carried out it would prevent a great deal of the difficulty.

By Mr. Allan :

Q. Do you consider that the present cattle sheds are quite sufficient for the whole season?—A. If they were somewhat strengthened they would. Some of the vessels carry these sheds for several seasons, and they seem to stand very well.

Q. About what sized vessel do you think should be allowed to carry cattle?—A. One gentleman referred to a small steamer, called the "Prince Edward," having carried cattle safely across the Atlantic. She was 882 tons net, length 253 feet, breadth 31 feet and depth 23 feet. In 1882 she left here on the 1st of September with 102 cattle, and on another voyage she carried 113. I think I understood Mr. Johns, one of the witnesses, to say that the animals were carried across in good order. The master of that "Prince Edward" was one of the best and most careful men we ever had coming to the St. Lawrence. There are a number of our shipmasters coming to the port of Montreal who would not allow an animal to be ill-used in their presence on any pretence whatever. We have men in charge of our ships who are careful, both for their own and their owners' interests.

Q. Have you any opinion to offer as to the size of a vessel which should be allowed to carry cattle?—A. I think that any vessel which is fit to carry passengers would be fit to carry cattle. I saw cattle brought from the lower ports to Quebec, on board schooners, and they were landed in good order.

Q. That is a very short voyage?—A. Yes; but I have seen some very dirty and rough weather in the Gulf.

Mr. BOND.—But they are carried in small numbers on board these schooners?—A. Yes; of course. But I contend that if an animal has a certain number of cubic feet of space, regulated by law, the same as is done in the case of an immigrant, I think they can be carried across very safely.

Q. Do you think that a vessel under 1,200 tons should not be allowed to carry cattle?—A. The steamers we have coming to the port of Montreal are not small. I contend that any vessel that will carry passengers across the Atlantic will carry cattle, if the cattle are properly housed and fed on board.

Mr. BOND.—There are lots of colliers coming here, which are sea-going vessels, and you surely would not recommend cattle to go on them?—A. Why not. If the British Shipping Act allows a man to risk his life on board a ship I do not see why an animal could not be shipped if it had proper accommodation.

Mr. BOND.—You do not attach any importance to the breadth of the beam of the vessel?—A. I do not. If you look at the registry of the office for 1856 you will find that the English vessels were all small, and they made as good time across the Atlantic as some of our steam vessels to-day. I think the cattle can be carried safely with proper accommodation.

By Mr. Smith :

Q. You have no recommendation to make as to limiting the size of the vessel?—A. None at all.

Q. Do you recommend that the cattle-carrying vessels should be lighted by electricity?—A. Electricity is very good in its way, but it costs a great deal of money.

Q. Then, you do not think it is necessary?—A. It is not necessary, and if we recommend a number of things which are going to raise the rate upon cattle I am afraid it would be detrimental to the trade. The fans are not expensive, except to an outside ship, and the double planking which I have suggested is not very expensive either.

Q. Do you think that outside or transient ships should be allowed to carry cattle?—A. I think that any ship has a right to go into any port in the world and take a cargo, if she comes under the requirements of the port. If it is made a regulation of this port that vessels should carry steam fans, of course every vessel carrying cattle would be compelled to have them, just the same as a vessel carrying grain is required to comply with the regulations.

Q. Do you think that the transient vessels are as suitable for the cattle carrying trade as the regular liners?—A. Some of the transient vessels are as good vessels as there are afloat, and they are well commanded.

Q. You have no objection to transient vessels?—A. I have none whatever, if they are properly fitted up.

Q. Did you load the "Straits of Magellan," which sailed for Aberdeen?—A. I saw her loaded, but the weather was so severe that no vessel could have stood it and landed her cattle in good order. Some of the finest vessels crossing the Atlantic met with such rough weather last fall that they never experienced the like of it before. The strongest and the best vessels on the ocean are liable to have their decks swept under certain circumstances.

Q. Do you think the "Straits of Magellan" was seaworthy when she left here?—A. She was perfectly seaworthy. The only trouble was that her decks were swept, and any other vessel under similar circumstances would have her decks swept with the same weather.

Q. Do you think anything depends as to the safe carrying of cattle on the experience of the captain in the trade?—A. All captains coming to the port of Montreal, or to any other port, have to make their first voyage; and to condemn a vessel because the captain had not carried cattle before is, I think, anti-British. No matter what experience a man may have in the cattle trade he cannot prevent some of the cattle being lost if he meets with this extraordinary bad weather on the Atlantic. The captain is not always on the bridge of the ship, nor is the chief officer either.

Q. It is stated here, in the case of the "Straits of Magellan," that one of the seas smashed the cattle stalls, and a large number of animals were carried over with the stalls? Do you think if the captain had nursed the ship this would have occurred?—A. It might have occurred, no matter how the ship was handled. I know that the sorriest man on board the ship was the captain for the accident that occurred. I know that captain well. He is a good man, and he would do his level best to get the cattle across safely.

Q. You think it makes no difference whether the vessels are transient or regular liners?—A. I do not like that word "tramp" applied to a vessel. It is a Yankee name, and if you call one of their Yankee ships a tramp it would cause war against the country. I cannot see any difference between a tramp and a regular liner if they are both fitted up well. As far as the fittings are concerned at present, I do not think there is any difference made between the tramps and the regular liners. They are fitted up in the same manner.

Q. Do you think there should be another inspector appointed in addition to the veterinary surgeon and the port wardens?—A. If there were an inspector appointed he would have his duties defined, just as the port warden has. It would not conflict with the port warden's duties, because the cattle inspector would have to look after the cattle fittings, and to see that the animals are properly accommodated on board. My inspection has nothing to do with the fittings at all, at present.

Q. Suppose you saw that the fittings were insufficient on board a steamer, what would you do?—A. I would point out to the captain that I thought his deck cargo would go adrift in a short time?

Q. And you would not give him a certificate?—A. I would not give him a certificate under these circumstances.

Q. You say you do not inspect the fittings?—A. It is not part of my duty at present, but if I casually saw that the fittings were not strong enough I would call his attention to it. I would advise him as a friend to strengthen the fittings, and if he did not listen to me before the cattle went on board I would take good care that the office of the ship would listen to me. I would not give him a certificate to enable him to sail.

Q. And you would stop the vessel?—A. Yes.

Q. Did you ever stop a vessel on account of the manner in which they loaded cattle on board?—A. No; but I have stopped them on account of the way the hay was loaded. If I considered a vessel was unseaworthy in any respect whatever I would not give her a certificate from my office, if I was to lose my situation on account of refusing it.

Q. If you discharge those duties at present, why do you recommend that another officer should be appointed?—A. I took my cue from the gentlemen interested in this investigation asking that another officer should be appointed.

Q. Have you any opinion to offer as to prohibiting cattle from being stored on the hatches?—A. I cannot see why there should be any prohibition to putting cattle on the hatches. The chief objection made now is, that when cattle stand on the top hatches the ones underneath do not get sufficient air, but if you had steam fans the animals would have plenty of ventilation.

Q. You see no objection to animals being allowed to stand on the hatches?—A. I do not, provided the vessel carries steam fans?

Mr. BOND.—Suppose a fire took place in the lower hold, and they had to open their hatches to get the hose down, would it not be dangerous to move the cattle off the hatches?—A. I believe the cattle are moved about now in the alleyway. In such a case there certainly would be a great objection to having cattle on the hatches.

Q. Would it not be a serious objection?—A. In case of fire it would be a serious objection.

Mr. WATT.—Did any case of fire ever come under your cognizance in any Montreal ship?—A. I do not remember of any such a case.

By Mr. Bond :

Q. You heard of vessels being burned at sea?—A. Yes.

Q. What about the "Canopus," last year?—A. That fire was on her deck.

By Mr. Greenshields :

Q. Did you hear about the steamship "Grecian" getting on fire?—A. The fire on the "Grecian" was during her voyage from England to this port. The "Grecian" is supposed to have taken fire from spontaneous combustion.

Mr. ALLAN.—I think it would be better not to open the hatches in case of fire. It might be rather a dangerous thing.

By Mr. Smith :

Q. Do you think hay should be carried on the upper deck?—A. I am against hay being carried on the upper deck, and always have been. I think that no hay should be carried on the deck, except a sufficient quantity to supply the animals until the vessel gets one day below Quebec.

Q. Do you think that the quantity of hay and feed for the cattle which should be put on board a ship should be a subject of inspection?—A. I do not think it would be worth the trouble to make a regulation about. The cattle shippers always attend to that matter, and they are anxious to put as much feeding on board as they are allowed.

Q. Do you think a regulation should be made prohibiting the loading of cattle on the steamers, except between 6 p.m. and 8 a.m.?—A. The most of the shipping of cattle in Montreal is done during the night. Of course, if you make a regulation

about that it will have to be carried into effect. I think it might prove a very great hardship if there were any rule made in this respect. There are a certain number of cattle, we will suppose, to go on board a vessel, and they are all ready to be loaded; but from some unforeseen cause the ship may not be able to take them on board at that particular time. If they were not allowed to go on board after 8 o'clock in the morning the vessel would be detained, and the cattle already on board the vessel as well as those remaining on the wharf would have to be left there sweltering in the sun.

Q. You are not in favour of any rule being made as to the hours during which the cattle should be loaded?—A. I am not in favour of such a rule. From what I can see, the ship-owners are as anxious to keep the trade as they possibly can be, and they meet the cattle-owners in every way they can. I think that such a rule might prove injurious, both to the cattle-owners and to the ship-owners.

Q. Do you believe that a rule should be made that no live stock should be loaded on any steamer until the the loading of the dead cargo has been completed?—A. I think that would be a very onerous rule on the ship.

Q. You think there is no necessity for any such rule?—A. I think there should not be such a rule. One end of the vessel might have completed the loading of the dead cargo, and I do not see any reason why cattle should not be loaded at that end of the ship, while the dead cargo was being loaded at the other end.

Q. You think it is not necessary to have any rule in this respect?—A. I think it would be detrimental to the trade in many ways. Suppose you pass such a rule, the cattle would be brought down to the wharf by train or otherwise, and some of the cargo might be detained. The cattle would have to remain there, and would not be allowed to go on board ship until that dead cargo arrived and was put on board first. That would be a great hardship. Most vessels arriving at the port of Montreal have to leave at daylight in the morning, so as to get down past the Narrows before dark. If the vessel were detained it would be more than inconvenient. I think that both the shipper and the ship-owner would object to having this made a hard and fast rule.

Q. Do you think there should be any regulation as to the number of cattle men who should attend to a certain number of animals?—A. I would leave that to the shipper.

Q. You have heard the evidence with regard to the cattle men being badly treated on board ship. Do you think they should be put on the ship's articles?—A. From what I have heard, from both the cattle men and the shipmasters, they ought to be put on the articles. I certainly think that the men crossing in charge of the cattle should be properly fed and properly treated. They should be as well treated, at all events, as the sailors on board ship.

By Charles Sullivan, Cattle Foreman:

Q. Would your recommendation that the cattle men should sign the articles apply to the foreman in charge of cattle?—A. I think it should apply to all on board ship who are not passengers.

Mr. SULLIVAN.—Well, that would be a very objectionable rule for everybody connected with the trade; and I, for one, would not sign the articles.

By Mr. Smith:

Q. You think the alleyway should be left clear from all obstructions, and that the scuppers should be clear, so as to keep the ship clean?—A. There should be free access to all the scuppers. There should be a rule made that there should be access to the scuppers at all times, because they are put there to clear the water off the deck.

Q. Do you consider it necessary to make a rule that when cattle arrive on the railway trains they should be rested at the cattle yards before being put on board ship?—A. From what I have seen, I think it would be advisable.

Q. Would that apply to ranche cattle?—A. "Ranchers" are different animals from ordinary domestic cattle. If all the cattle were like the "ranchers" there would have to be different regulations altogether, and different men in charge of

them. You could not take ranche cattle through the streets of Montreal. It is very difficult to say how cattle should be accommodated here, considering the present crowded state of the port. The driving of animals from the stock yards to the wharves in the heat of the day and amidst the general confusion of the traffic on the streets injures them very much.

Q. What remedy would you suggest?—A. I think the remedy will come when we have these new harbour improvements. I could not recommend anything as to the improvement of the shipment of cattle in the present state of the harbour.

Q. Would not a union stock yard remedy the evil, to some extent?—A. I could not say that it would, because there are difficulties about that union stock yard. If you have the union stock yard below Maisonneuve, and if you had to take the vessels down there to be loaded with cattle and turn them in the river, you would block up the port of Montreal in a very short time. I do not think it could be done. If one of those vessels met with an accident going down to the wharf, and one of the ships were sunk, it would block up the port for the rest of the summer.

Q. But could not the cattle be loaded on the ship, if they were taken from the stock yard on lighters?—A. I have enquired about this system of loading cattle by lighters, and I do not think it will suit this port.

Q. That is the system they have for loading cattle in New York?—A. Yes; but New York and Boston are bays, with only a slight tide in them, and they are different altogether from the port of Montreal.

Q. You think that this system could not be carried out here?—A. I would not take stock in it. It is impracticable, on account of the current here, and for some other reasons. If it could be carried out it would be a good idea, but I do not think it would ever be a success here. There was a suggestion made here that no vessel should leave the port after a certain hour in the morning. Now, it would take several barges to load a vessel, and the vessels would have to wait in their turn while the barges were alongside. I think the thing is impracticable.

Q. Do you think it would be a good idea to provide that thermometers should be fixed up in the lower holds, so as to ascertain the heat there?—A. A thermometer would be the best guide by which to ascertain the temperature; but your thermometer might register certain degrees of heat while it would not show that the air was clear. It can be proven in five minutes, to any man, whether or not the air in the lower part of a vessel is changed if the steam fans were working. It can be very easily found out whether or not the steam fans are pumping in a certain quantity of fresh air.

Mr. BULMER, Chairman of the Harbour Commissioners.—Permit me to remark that I do not think there will be any difficulty in bringing barges laden with cattle up against the current. We know that sailing ships of 1,000 tons come in here, and are towed up against the current, and down again, without any difficulty?—A. But it is a different thing when you have movable freight, like cattle, on board.

By Mr. Watt:

Q. Do you know that there is a current both ways in the harbour of New York?—A. Yes.

Mr. WATT.—Every head of cattle in New York, shipped from New York, is carried on barges to the steamer. Sometimes there are 300 or 400 head of cattle on these barges, and the current in some places is stronger than it is here.

Mr. SHAW.—With reference to the suggestion made by Mr. Johns, that the cleats should be strongly fitted up, so as to sustain the cattle on their feet in rough weather, I thoroughly agree with that suggestion. I have seen these cleats last for several voyages, but at the same time I know that they have broken away in a short time. The cleats are absolutely necessary to prevent the cattle from slipping with the rolling of the vessel.

Q. Is it of sufficient importance to make it a rule that these cleats shall be well and properly fastened to the deck?—Yes; it is a very important thing that the

cleats should be properly fastened to the deck of the steamer, or to the false deck as the case may be.

Mr. ROUTH.—It has been stated here that the steam fans have only been carried down on the steamers as far as Quebec or Rimouski, and then transhipped to Montreal. Do you not think these fans are just as necessary at sea, when the hatches are shut down, as they are on the river?—A. Yes; I consider they would be very necessary at sea, and I think it is a mistake to remove them from a vessel when she gets to Quebec.

Q. Have you ever known that the vessels discharge these fans at Quebec?—A. I think that some of them do. My evidence is, that the fan should be kept on the vessel all the time the cattle are on board.

By Mr. Greenshields:

Q. Do you not know that some of the vessels take the fans off at Quebec, so as to save some expense?—A. I have heard of them doing it, but I do not know any instances of the kind. I have heard that the Allan steamers have done so.

Q. And the fans were therefore of not much use on board the steamer?—A. They did their work as far as it went, and did it well. There is always a certain amount of circulation of air when a vessel is at sea, and no accident occurs so long as the vessel does not break down; and the cattle, under such circumstances, would have very good ventilation without that; but if the hatches had to be battened down it is a very different thing altogether. What I have stated about the Allan Line taking off their fans at Quebec is mere hearsay. I was not on board ship when that was done, but I heard that it was the case.

Q. Do you know why they took the fans off at Quebec?—A. It was on account of the danger from heat between Montreal and Quebec. I suppose it was believed that as soon as the vessel got into open water and into cool weather that the danger of the want of plenty of fresh air would cease. On a hot summer day, when vessels leave here in the morning, there is very little wind, and if the wind is from the westward the smoke of a steamer sailing 10 or 12 miles an hour goes up straight. That is where the fans come in useful.

By Mr. Greenshields:

Q. Would not the fans come in useful if the hatches were fastened down in a storm in mid-ocean?—A. I am sure they would. I have no statistics to prove what I say, but I have no doubt that a great many animals are lost from suffocation when the hatches are battened down. I must say that I think the steamship companies are willing to do all they can in this matter. I know that they treat me well as port warden, when I lay any suggestions before them, and I am sure they would do the same if the cattle-owners made recommendations to them.

This concluded the evidence of the witness.

MICHAEL SCANLAN, Superintendent of Shipping for the Dominion Line, gave the following evidence:—

By Mr. Smith:

Q. Please state what are your views in reference to the subject matter of this enquiry?—A. I wish to make a statement with regard to the treatment of the cattle men who go in charge of cattle on steamers of the Dominion Line. I have made out the passes for all the cattle men on board the steamers of this line, and I wish to state that all outfits are put on board for the use of the cattlemen during the voyage. For every twenty-five animals a man gets a pass, and for each man there is a complete outfit, composed of a straw tick, a straw pillow, a blanket, a knife and fork, a spoon, a plate and a tin pannikin. Our stewards have instructions to give the men food equal to the sailors, and if the men report the stewards for any neglect, and if

the charge is proven, they will be reprimanded or dismissed. I have never had a complaint, to my knowledge, that bad food was supplied to the cattle men on the Dominion Line steamers, or that they needed any of the utensils which we supplied to them. I may say that we furnish altogether new material for each trip, with the exception of the blankets, which are washed after each voyage and carried back on the steamer.

By Mr. Greenshields:

Q. Do you superintend the supplying of these articles yourself?—A. Since the first cattle were shipped at the port of Montreal I have superintended the loading of cattle, and I know how such things are managed. The foremen of the cattle in our steamers mess with the petty officers, and everything is supplied them by the ship.

This concluded the evidence of the witness.

JOHN LEE, Alderman, of the City of Montreal, Ship Carpenter, gave the following evidence:—

By Mr. Greenshields:

Q. What is your business, Mr. Lee?—A. My business in connection with this enquiry is that I fit up cattle stalls on a great many of the ships that leave this port. I have heard the evidence given here for the last few days with regard to the fitting up of the stalls with 2-inch boards, and in my view that is unnecessary. It is also unnecessary, in my opinion, to erect stationery sheds on these steamers for the accommodation of cattle.

By Mr. Smith:

Q. Do you think that inch boards are sufficient?—A. Yes; I think they are sufficient. I have fitted up ships here in the spring of the year with inch board fittings, and so long as they are not torn off these fittings have lasted for two or three seasons. There is a great deal of difference as regards the building of stalls on ships. I fitted up the first cattle stalls erected on a steamer in the port of Montreal, and I have been at the business ever since. I have never crossed in a steamer laden with cattle, but I have a pretty good knowledge of how things are managed on board, because I have made it a point, in connection with my business, to get all the information possible from the captains of the vessels and from the foremen in charge of the animals.

Q. Did you fit up the SS. "Straits of Magellan"?—A. Not at the time she lost her cattle. I am of opinion that about the latter end of September, probably, there might be somewhat stronger fittings, by placing a cross-beam at every 10 or 15 feet from one side to the other. When ships carry cattle, of course their hatchways have got to be clear, and if those angle-irons, which have been recommended, are put on the deck, I think they will be an obstruction. I am a joiner and carpenter by trade, but I have a great deal to do with fitting up accommodation on board of these ships, and I know considerable about it.

Q. Do you think that the ordinary posts erected on the ship, with wooden boards attached, are good enough to accommodate the cattle?—A. Yes; except on the last few voyages in the latter part of the year.

Q. Well, that is the time all the difficulty occurs?—A. I would recommend, then, that you take the ordinary stall and put another inch board on top of the inch board already fitted in.

Q. You think that two boards, 1-inch thick, are stronger than a single 2-inch plank?—A. The two single 1-inch boards will bear more pressure than the 2-inch plank. If the stalls are made of 1-inch plank there are sure to be openings. As regards angle-irons and those fixtures which have been spoken of, the sea will carry them away just as quickly as they will John Lee's wooden stalls.

Q. In the roofing of the stall, do you not break the joints?—A. Yes, sir; we do; but that is not altogether an evil, for some cattle men will tell you to knock out a board here and there, so as to enable the cattle to get more air in the steamer. After September, if it is necessary to make the stalls of a certain strength, every man would have to go by that law, and there would be no cutting down prices to put up weak fittings.

By Mr. Watt :

Q. You are aware that no man can fit up a vessel with lining for a grain cargo unless he has passed an examination and got a certificate. Would you approve of the same rule being applied to the cattle trade, namely, that no person should fit up stalls for cattle unless he had a certificate?—A. If the Government made that rule it would have to be abided by, but there is a difference between a cattle and a grain cargo. Grain is a damagable cargo, and there is some experience required in fitting up a ship to carry it; but a man could be a good artisan and yet have no experience in the cattle trade. However, if he fitted up three or four ships he might be a very good man at the business and have no certificate.

By Mr. Thom :

Q. It has been stated in Mr. Plimsoll's pamphlet that the fittings of the stalls were made of $\frac{3}{4}$ -inch stuff. I would like you to describe the fittings usually made here by yourself for the accommodation of cattle, both on the regular liners and on the transient boats?—A. First and foremost, the boards to divide the cattle in the stalls next to the bulwarks of the ship are 9 inches wide and 3 inches thick. The forehead one, where the animal's head is, is 6 feet by 3. The breast board is 2 feet 9 inches. The division boards are composed of 2-inch stuff, and I have got stringers that run along all these stanchions which are fixed on with 5-inch nails. We also put down a cleat 6 inches by 3. I have seen as much as five and six tiers of hay on the top of a stall, and although that is a heavy weight the boards never moved.

Q. You never saw $\frac{3}{4}$ -inch stuff in those stalls?—A. That is altogether out of the question. I never used anything lighter than 1 inch full, which is generally $1\frac{1}{8}$ inch.

Q. It has been stated that the roof of the stalls is not sufficiently braced up to carry either hay or men?—A. I have not the slightest doubt that some people might fit up the stalls in that way, but any work I ever did would be sufficiently strong, not only to carry one man, but to carry fifty men. A man could not get through the stalls the way I fix them.

Q. You think that the stalls are just as good as if they were fitted up with iron frames?—A. Just as good, and perhaps better; for an iron frame will sometimes snap.

By Mr. Smith :

Q. Do you fit up these stalls by the day's work or by contract?—A. I do it by day's work for the Dominion Steamship Company.

Q. Not by contract?—A. No, sir; and my orders are to make everything of the best, and not to skimp any of the work. Sometimes I do it by contract, and the contract pays me better.

Q. That is to say, you are not so particular as to the materials?—A. Oh, yes, sir; I am; but I sometimes make more out of it by contract than I do by day's work. I make a specialty of the business, and I get my lumber cut this year which I will use next year, so that it will be well seasoned.

Q. Do you ever nail the cleat so insecurely that it will give way, and in consequence the animal sometimes falls and breaks his leg?—A. I never knew them to break. Up to two years ago the cleats were too small, but they were well nailed down. I was told that on some of the ships I fitted up myself the cleats missed, and when I saw that I increased the size of the cleats. For the last two years the cleats have been of a better description than they were formerly. It is a most important thing to fix up these cleats strongly, so that they can sustain the cattle. I may also say that I always leave a space, so that the scuppers can be cleared, on board ship.

By Mr. Greenshields :

Q. What kind of things do you put up for the cattle men to sleep in?—A. They are splendid stalls. They are made of the same material as the cattle stalls, when we are asked to erect them on board ship.

Q. But you do not always erect them on board every ship?—A. I only erect them when I am told to do it.

Q. When there is nothing said, you do not interfere?—A. I only erect them when I am told to do so. I think the men have rooms on the Dominion Steamship Company's steamers.

Q. Then it is only on the transient vessels that you erect these stalls for the cattle men?—A. Yes.

Q. How do they sleep on these transient vessels, when there is no accommodation supplied for the men?—A. I do not know. When I fix up the berths I make them 4 feet wide, so as to accommodate two men in each berth.

By Mr. Greenshields :

Q. You give the cattle 2 feet 8 inches space each, and you give the men 2 feet each?—A. I understand they have plenty of room in these berths.

By Mr. Smith :

Q. They are more closely packed than the cattle, I suppose?—A. They have plenty of room. I have been told that after making these provisions for the sleeping accommodation of the men, that the majority of them sleep in the hay.

Q. You build those stalls right alongside the cattle stalls?—A. Sometimes they are, and sometimes they are not.

Q. Is it true that the water comes in on the cattle men and soaks them through?—A. The stalls are water-tight when they leave the port, but after that I cannot tell you. As a rule, when they are in port in warm weather they wash down the decks, and if any water came through the deck I would know it, as I would be anxious to tell the captain that he wanted some caulking done there. I am under the impression that if water comes down on to these berths it is because the iron of the deck sweats.

This concluded the evidence of the witness.

MONTREAL, 10th January, 1891.

On this 10th day of January, 1891, the Enquiry was resumed, Mr. William Smith, Deputy Minister of Marine, presiding.

JAMES R. DICK, Manager of the Boys' Home, Montreal, gave the following evidence :—

The Boys' Home in Montreal is an institution supported by the earnings of the boys who live there and by subscriptions from private citizens. We have about \$1,000 a year of private subscriptions, and between this and the earnings of the boys the Home is maintained. We have from 60 to 80 boys and young men, from 10 years of age to 20 or 21 years, in the establishment. Some of these young men and boys are engaged in learning trades. When the boys come in we get situations for them, and for those who do not wish to remain in the institution we find places for them with farmers. We have a charter for the Home, of course, and the boys are under discipline. I wish to give evidence concerning the abduction of our boys by cattle foremen on cattle ships. Most of these boys are immigrants in this country, and have been sent out to our institution. It happens that some of the boys may be placed out in care of farmers, and after being there for some years they may get tired of farm work. Perhaps they have been city boys before they left the old country, and as they do not like farm work they generally seek the cities again.

By Mr. Smith :

Q. Do they learn much from these farmers ?—A. No, sir ; I do not think they learn anything at all. No farmer takes a boy unless he wants to get a good deal out of him and to give him very little in return. When they come to the Home we take them in and try to adapt them for any trade we think them specially fitted for.

Q. Have you any difficulty in securing occupation for these boys ?—A. No, sir. In this country any respectable boy over ten years of age can be easily taught how to make a living. We keep them in the Boys' Home, give them clothes and food, and get them apprenticed to a trade which will make men of them if they stick to it. If a boy is willing to work we do not ask him any questions, and any boy who is willing to get on can do so.

By Mr. Smith :

Q. It has often been said that people cannot get a living in the cities. How do you provide employment for these boys ?—A. I have no difficulty in getting employment for my 70 or 80 boys. When a boy comes to the Home two or three days satisfies me whether he is willing to work or not, and if he does not work he does not eat. If they do not keep up to the rules of the institution, or are particularly bad, I show them the front door. We are very kind to the boys, and try to get them into some business for which they are naturally adapted. I have tried bright looking boys at one business, and when they failed in that I got them into another, and they succeeded very well. What I wish to complain of is, that a boy may be apprenticed to some trade in the city, and after three or four years (as the case may be) they get a longing to return to their old homes, and sometimes when they have disappeared I have found that they have gone across as cattle men on board these cattle ships.

Q. How old would they be when they are taken on these cattle ships ?—A. From 17 to 18 years of age.

Q. Are those boys anxious to get back to the old country ?—A. When a boy is out here for a year or two he sometimes gets a longing to go back to the place he comes from, no matter whether he has a home there or not. We put no restrictions whatever on our boys, except that they have to attend to the discipline of the Home. They have to be in at half-past nine for prayers, but sometimes they do not turn up at night, and we have afterwards found that those boys who neglected to come to the Home have gone away with these cattle ships. That is what I wish to complain of. They go down to the wharf, as I have been informed, and some of these cattle foremen induce them to go on board the ships by offering them £2 to take charge of the cattle on the voyage. In such a case the cattle foreman offers the boy a fraudulent inducement to go across the Atlantic, because sometimes they are not paid when they arrive there.

Q. How does the cattle man know that the inducement is fraudulent ?—A. He offers money to them to go across, but he does not pay them. My chief object in coming before the Enquiry is make a recommendation that every man going in charge of cattle should be entered on the ship's articles, and that the age should be limited at which they should take those men across to do this work. It very often occurs that when these boys get to the other side they cannot get the cattle foremen to pay them their wages, and they are left destitute.

Q. How would it remedy the evil if they were put on the articles ?—A. They would get their wages on the other side when they did go across, and there would be a barrier against shipping boys under age. I would recommend that these boys should not be allowed to sign the articles without the consent of their parents or guardians. This system of taking boys to go across in charge of cattle is a great evil at the port of Montreal. I have had frequent enquiries from parents about their children, and sometimes on tracing them we found that they had gone over in these cattle ships. If these boys were entered on the articles they could be more easily traced.

Q. Do you think that if cattle men were made to sign the articles the masters of vessels would not take boys under age, even if boys under age can be shipped according to the law?—A. The parents of some of these boys who run away from home would be able to trace them. I think that no one should be put in the ship's articles to take charge of cattle unless he were 20 or 21 years of age.

Q. You think no one should be taken on the articles of the ship unless he was 20 years of age, unless with the consent of his parents or guardians?—A. Yes. We have great trouble in the Boys' Home on account of some of these young fellows running away. The boys come in and get their supper at night and they disappear after that, and as the ship sails at daybreak we cannot reach them. I have boarded a steamer at 2 o'clock in the morning to look for some of my boys. I asked for them, and the cattle men denied that they were on board, and I have had to go and get a policeman and search the ship, after which we sometimes found the boys and brought them back. There is a great deal of loss to the boy and to the community when he goes away like this. The loss is four-fold. There is a loss of money to the institution on the other side which first sent them out here. There is a loss to the Boys' Home on this side, which has supplied them with food and clothing for the two years that they were serving their apprenticeship, and there is the loss to the employer to whom the boy has been indentured. A boy seldom comes back again who goes with the cattle men. He loses his trade and he gets completely demoralised. I was in Liverpool last summer, and I met there a boy who had been apprenticed to Morton, Phillips & Bulmer for two years at the printing business. He disappeared one night, and I heard that he had gone across in a cattle ship. I saw that same boy afterwards a scavenger in the streets of Liverpool. He lost his trade and his self-respect, just because the opportunity occurred one night for him to steal away on a cattle ship. That unfortunate trip destroyed his future and deprived his employers of his services. I would recommend that there should be a penalty for any one seducing an indentured apprentice to go on board these ships.

This concluded the evidence of the witness.

DAVID ALLAN WATT, of the City of Montreal, Freight Broker for the Allan Line of steamships, gave the following evidence :—

By Mr. Smith :

Q. It is scarcely necessary to say, Mr. Watt, that no questions need be asked of you, because we know you are full of information on this subject. Anything that you may have to say we will be very glad to hear now.

MR. WATT.—I will only confine myself, sir, more or less to general statements. My friend, Mr. Thom, of the Beaver Line, who has listened to most of the evidence here, will, I understand, follow me, and I will leave what I may call the details or specialties to him. I have been absent from the city, and I do not know precisely what has been done at this enquiry, but I suppose that the reason for it is the introduction of this Bill in the Imperial House of Commons, prohibiting the export of cattle from this country. The Bill now before the Imperial Parliament, as you are aware, prohibits in effect the importation of live stock from America and permits the importation of live stock from the ports of Europe. That is a Bill of very great gravity, and I suppose the fact that this Commission has been appointed here proves that the Canadian Government are aware of the gravity of the situation.

MR. SMITH.—We are fully aware of it.

MR. WATT.—This Bill involves very grave international questions, in so far as it permits one country to do that which it does not permit another country to do, on account of distance, and it is also of very great importance to the trade of this continent, and more especially to Canada. I do not think that the gravity of the measure, if it be passed, is fully understood.

Mr. SMITH.—I do not quite agree with you there. I think the gravity is very well understood.

Mr. WATT.—I have some doubt if the gravity of the measure is understood in England.

Mr. SMITH.—I think it is very well understood in this country, however.

Mr. WATT.—I think that the English people and the English members of Parliament do not realize the gravity of the step which this Bill proposes to take.

Mr. SMITH.—I think that the people of this country understand its gravity.

Mr. WATT.—I suppose they do. I think that the mere fact that a Bill of that sweeping and, I may almost say, revolutionary character, has been introduced in the English House of Commons and has been referred to an inter-Departmental Committee of two Departments, presided over by a member of the Government, shows that the Bill is of a very grave nature. The Bill has the support of members representing the most influential class in England—I mean the landed class. It is class legislation. It is introduced, as I believe, for the express purpose of improving the position of the landed proprietors and of enhancing the price of meat in the English market. The present House of Commons in England is largely composed of landed proprietors, and I think I am right in saying that the landed interest predominates in the present Imperial Parliament and in the present Government. That fact alone will require that every effort should be made by the Canadian Government and by the Canadian people to prevent the passage of such legislation. You have very justly said, Mr. Commissioner, that this Bill is taken charge of by the humanitarians, and that I believe is undoubtedly true. But the landed class—the men who have many interests at stake in this matter—are, in my view, simply exploiting the humanitarians and are simply urging them to steps which the facts do not in any way justify, and which never have been justified. I would not for a moment say that humanitarian legislation is not needed, but it ought to be applied in according with the facts in the present instance. It would seem that the humanitarians were urging the abolition of a traffic in which, if cruelties exist, they might be either avoided or improved by legislation. If cruelties do exist, legislation should be provided to prevent the cruelty and to punish the criminals, instead of introducing legislation to abolish a very important industry. It would be quite a parallel case if, for instance, because of cruelties practised on horses, we attempted to remove that evil by preventing the use of these animals for draft purposes entirely. In point of fact, as far as it appears to me, the humanitarians are placing this cattle trade on the same footing as they might be supposed to put the slave trade, the opium trade, or the traffic in women—that is, they seek to make the trade infamous by prohibiting it. In this case as in others the idea should be to prevent as far as possible the existence of cruelties and to punish the criminals when cruelties have been proven to exist. Now, so far as regards the steamers engaged in this cattle export trade from Montreal, and I speak only for the regular liners—their records show that these alleged cruelties have not existed up to the present. They have been engaged in this cattle business for the last fifteen years and have carried thousands upon thousands of animals, and their loss on the average during these years is as low in my judgment as it is possible to have it. It is so low as to call for no legislation or enquiry whatever. I think if there had been no other traffic than the carrying of these animals by the regular liners there would be no enquiry and no complaint. No persons, by any possibility, can have any more interest in carrying the animals safely, or in reducing the mortality or injury to the animals, than the agents of the regular steamship lines. They can appeal to their records for the evidence of their success. There is really, properly speaking, but two interests concerned in this cattle export business. There is the interest of the producer and the interest of the carrier, so far as Canada is concerned. The cattle men and the underwriters, and the others concerned in the trade, have of course an interest, but their interest is ephemeral. The interest of the cattle-raiser is paramount, and the interest of the carrier is also paramount. Now, sir, I think that if these two other interests I have referred to—the cattle shippers and the underwriters—had as high a record as the record of the regular

liners, there would have been no occasion for this enquiry; and I think it must have occurred to you, sir, that while the ships have been, so to speak, comparatively silent, the underwriters and the cattle-shippers have been in this matter peculiarly clamorous. One would suppose that the underwriters and the cattle-shippers had perfectly clean skirts in this case, and that all the blame fell on the ships; whereas, sir, the precise converse of this is the case. As far as the regular liners are concerned they are, on the whole, blameless, and their records prove this. So far as the cattle-shippers and the underwriters are concerned their record is all that cannot be held to be blameless. You must have noticed that the cattle-shippers and the underwriters have had nothing, or very little, to say with regard to their own business. The underwriters, for the most part, confine themselves to the shippers, and say nothing about themselves whatever. The cattle-shippers confine themselves very much to echoing the statements of the underwriters, with the addition of a few more suggestions to the ships. Now, I think it must be perfectly plain that the first essential of success in this business rests with the cattle-shippers. First of all, their cattle should be well bought, and should be sound, healthy animals; and in the next place, the attendants which they select should be men competent to care for their animals. The animals should be loaded on the ship's deck in perfect condition, and the food supply and the water supply should be of the best quality.

Mr. SMITH.—We have on evidence that the ship furnishes salt water sometimes, and on more occasions the water has been so hot when supplied that it made the animals sick.

Mr. WATT.—I would distrust a great deal of that evidence until I had it very strongly corroborated. A great many wild statements have been made before this Enquiry. If any special vessel has been mentioned in regard to this matter, I think it would be your duty to give the owners of that vessel, when the ship is in port and the officers and crew are here, an opportunity of giving rebuttal evidence. There is no reason why a ship should furnish poor or inadequate water. It is in the interest of the ship quite as much, if not more, than in the interest of anyone else, that the water should be good and that the cattle should be properly supplied with it. The Government, as you are aware, inspect the animals on being shipped, and to that extent are implicated in their health. The Government has taken no pains hitherto to see that the men who attend these animals on their voyage are competent for their duties, or that the feed supplies put on board ship are ample and of good quality. I do not know, sir, whether that is a legitimate function of the Government or not, but it is quite as legitimate a function as many other suggestions that have been made to you here. I noticed all the cattle-shippers suggested as a remedy for injury or loss of animals that the ship should receive no freight, except on animals which were landed alive on the other side. I would like to point out to you that the ship, in point of fact, has earned her freight when she sails. She has provided the space on her decks for these animals. She has erected fittings for these animals, and she has given passes to the cattle men and made arrangements to carry the fodder. When she has sailed for her destination she has earned her freight money. Now, I would suggest that it would have been a much more reasonable suggestion, that the cattle-shipper should receive no insurance money for any animal that died on board ship from a preventible cause. He is supposed to find a healthy animal, proper attendance and proper food, and to physic the animals when sick and to care for them; and it would be a much more reasonable suggestion that he should be the loser, in the event of an animal having died from preventible causes, than that the ship should not be paid the freight. I do not think that either of these suggestions is competent or can be carried out, because the underwriter comes in, and he will insure the ship or the shipper with equal indifference; his purpose being to get a premium. Respecting these underwriters, I think that if they, who have been so free in giving advice to the ship, had done their part of the duty with anything like the ability and success that the regular line of steamships had done theirs, this enquiry would have been unnecessary. The leading losses that have arisen year in and year out during the last fifteen years have arisen from the

inability of the underwriter to properly classify his ship and to properly discriminate as regards rate of premium. There was a time, sir, a year or two ago, as you may know, when there was an underwriters' pool in Montreal. It was in the year 1887. I had occasion at that time to look into the business, and I have some figures before me which will better illustrate what I mean, perhaps, than any other data. In the year 1887 this pool had the control of the entire underwriting of the St. Lawrence, practically speaking. As a matter of fact, it was almost impossible to get good insurance on a St. Lawrence shipment otherwise than through this pool. They classified ships and they fixed rates of premium. During that year they insured 68,000 head of cattle, and of these 68,000 head about 49,000 head were carried by the regular liners—that is to say, the Allan, the Beaver, the Dominion, the Donaldson, and the Furness lines, and about 19,500 head were carried by other vessels. The Allan, the Beaver and the Dominion vessels lost about a quarter of 1 per cent. The Donaldson and Furness vessels lost a little over one-half of 1 per cent., and all the other lines lost $4\frac{1}{2}$ per cent. I introduce this to controvert or to disabuse your mind respecting the evidence of the port warden. His evidence was that transient and outside vessels, broadly speaking, were, if not equally competent with the other lines to carry animals, at least not incompetent, or to be seriously discriminated against. These figures which I have quoted show that these outside vessels lost about sixteen times as many animals that season as the regular traders. The underwriters insure the outside steamers at from $1\frac{1}{2}$ to 2 per cent., and the regular liners at from $\frac{1}{2}$ to $1\frac{1}{2}$ per cent. The rates somewhat differ as to the season of the year, but do not accord to the risk or to the losses on these two classes of vessels. The rule has been to increase premiums very considerably in the autumn of the year, but no evidence I have been able to gather goes to show that the increase of premium in the autumn months is warranted by the loss. In this particular year of 1887 I find from my notes that the insurance by regular first-class ships was a minimum of $1\frac{1}{2}$ per cent., whereas the loss was only $\frac{1}{4}$ per cent. But during the months of October or November the rates rose to 5 or 6 per cent., or even higher. I had occasion to examine as to whether there was any justification for the increase of rates, and I found that, as regards results, there was none. In point of fact, after examining carefully I found that the heaviest losses arose out of shipments which were at sea during June and July. On shipments at sea in August the losses were absolutely *nil*. June shipments from the port of Montreal were the worst, and during the two weeks of November, up to the close of navigation, the losses were less than a quarter of 1 per cent. I enter into this argument simply to prove that a good deal of this is a preventible loss, and loss which the underwriter, if he had exercised due discrimination and care, could have prevented. He could have prevented it by refusing to insure ships of a certain character, or by rating them at such a premium as would have made it profitable for him to carry these heavy risks. As it was, sir, the whole trade of the country and the traffic of the regular liners—the good record of the regular liners—went to pay for the losses of other vessels. In connection with this I wish to file the following statistics:—

During the seasons of navigation of the years 1885, 1886, 1887, the cattle-carrying of the Allan, Dominion and Beaver Lines resulted as follows:—

	Animals Loaded.	Lost.	Per cent. per Line.
	Head.	Head.	
Allan.....	57,204	155	0.271
Beaver.....	29,439	108	0.367
Dominion.....	31,110	65	0.209
	117,753	328	

By years—1885, 1886, 1887 :—

—	Head.	Head.	Per cent. per Year.
1885.....	42,221	138	0.327
1886.....	37,379	72	0.192
1887.....	38,153	118	0.308
Average.....	117,753	328	0.278

General results of the business of the Montreal Cattle-writing Pool for the Season of Navigation of 1887 :—

—	Animals Loaded.	Lost.	Percentage of Loss per Line.
	Head.	Head.	
Allan, Beaver and Dominion.....	38,153	118	0.278
Donaldson and Furness.....	10,691	36	0.367
All else covered by them.....	19,493	843	4.325
Total.....	68,337	997	

By Mr. Greenshields :

Q. Is it not a fact that these outside steamers were rated by the insurance companies 2, 3 and 4 per cent. higher than the regular liners ?

Mr. WATT.—No, sir ; not the time the losses occurred. The course of business was, that up to the end of July the losses of the underwriters had been extremely heavy. In fact, they were in *extremis*, and they then turned round and increased the rates of premiums on all ships alike. Whether they discriminated rightly I do not know, but I am certain that at no time did they ever charge premiums proportionate to a loss of a quarter of 1 per cent. on the regular liners, and to a loss of 4 per cent. on the other liners. The class of people who are sent over to attend to these cattle on board ship has largely occupied the attention of these meetings. I may explain, sir, that so far as the ship is concerned, it is the duty of the shipper of the animals to deliver them on the ship's deck in good, sound condition, and it is his duty, further, to receive them from the ship's deck in England. The ship's duty is to carry them safely, after they are loaded from the port of Montreal, to the port on the other side. A good deal of your attention has been occupied with the mode of handling these animals in the port of Montreal, and a great deal of suggestions have been made to you. Some of them are practicable, and some of them are quite impracticable. The ships have no very special interest, as ships, in these improvements, more than the interest that they have in landing their cargo in good conditon. The question as to whether the animals shall be brought to this port by rail or water, and whether they shall be kept in cattle yards for a certain time after they are brought here, does not appertain to the ships. I can only assure the cattle-owners and others that any well devised scheme they may make to improve the shipping facilities at Montreal will have every help and aid that the ship-owners can give them. This question is largely one of cost. To provide special stock yards or special wharves at which cattle may be shipped, or to provide special shelters for them on the dock, or to provide a special railway track—all are questions of expense. It must not be lost sight of that cattle constitute only one factor in the shipping business of the city, and that to do a cattle business profitably all other business must be profitably done, too. I may say that it would be quite impracticable to

confine the business of the port to any great extent to cattle shipments. It would be equally impossible, I should think, to make any special arrangements for the handling of cattle. We ship people have precisely the same experience regarding other cargo. The grain shippers have constantly proclaimed that their peculiar business requires peculiar and special facilities. We have been constantly urged that we should remove ships from one wharf to another, in order to load grain direct from the elevator, and that there should be no inconvenience in bringing the grain from one side of the Atlantic to the other. It is the same with regard to flour shippers. They want a warehouse, at which the ships would go and load the flour on board. We therefore say that, in this respect, the cattle shippers are not peculiar. In listening to these complaints from the interests concerned, one would suppose that there was nothing but a certain special commodity in which the ship-owners were interested, and that ships had nothing to do but to facilitate that one business and that alone. I need not say, sir, that this is quite a limited view to take of the business of this port. The cattle business can only be done perfectly and well by ships carrying mixed and general cargoes. I do not think that it is worth while that I should discuss the various schemes that have been proposed here, further than to say that the cattle-shippers and others interested in the trade can always rely upon the support of the shipping interest in any well-devised plan that will not involve taxation of the general trade. I might pass from the various suggestions that have been made with regard to the ships—chiefly by the underwriters—as to how and where cattle shall be stored, as to how secure the fittings should be, and as to whether there should be electric lights, and nothing but electric lights. All these things are matters for consideration, and if you get your legislation on those points I think you can, in preparing this legislation, perfectly rely on the long experience and knowledge of the shipping people to perfect your regulations as far as possible. The interests of the ship-owners are precisely the same as the interests of the cattle shippers. They have been fifteen years in the business and they have a good record to point at. This is more than almost you can get in any other department. There are two things which I might deprecate. The first is the question of permanent, solid fittings on the hurricane decks of the ships for carrying cattle. Speaking under reserve, I think that the proposition is impracticable; and, moreover, I think that the carrying record of the regular liners shows that such permanent fittings are unnecessary. The other point is, that I think the changing of vessels from one berth to another is extremely difficult to carry out in practice. It is the duty of the shipper in every port of the world to bring his cargo to the ship, and in the case of cattle it is also the duty of the shipper to load his cattle on board the steamer. The question of the ship shifting her berth in order to get her cattle or any other part of her cargo is one of cost, and it has been found in all the Atlantic ports with which I am acquainted impossible to carry it into practice. The cargo is invariably brought to the ship, to be loaded on board the ship.

Mr. BOND.—You referred to the insurance pool of 1887?—A. Yes, sir; I did.

Q. Are you aware that the Cattle Export Lloyds was one of the companies in this pool?—A. I do not remember at the present moment.

Mr. BOND.—I was secretary to the association at the time, and I can state that the Cattle Export Lloyds was one of the companies. Are you aware that the Cattle Export Lloyds is chiefly formed of members of the Allan Steamship Company's firm?—A. I really do not know just now, but I will procure you the information and hand it to you.

Mr. BOND.—Well, I will submit one of the Cattle Export Lloyds' certificates, to show that it was chiefly composed of members of the Allan firm.

Mr. WATT.—I do not suppose that there will be any objection to your doing so.

Q. Do you know that the attorney of the Cattle Export Lloyds at that time was Mr. Jackson Rae?—Yes.

Q. Mr. Rae was a connection of the members of the Allan firm, was he not?—A. I think he was a distant connection by marriage with some of the members of the Allan firm.

Mr. BOND.—I will file the statement, which will show that the underwriters have discriminated in a large degree with regard to the classes of vessels they insured. That statement I will furnish to you, sir, in a short time.

Mr. WATT.—I make the statement that the underwriters had the opportunity of preventing a great deal of this loss. I state that they insure the regular liners at a rate far beyond the loss that occurred on these vessels, and that they did not discriminate sufficiently against the vessels which made the losses.

By Mr. Greenshields:

Q. Will you look at the first page of the statement handed to you by Mr. Bond, and state if you do not find four classifications of vessels coming into this port?—A. I do. One is called the select, one is called the first, one the second, and one the third class.

Q. Will you look at the same page, and say if there is not a large discrimination as to the rates of insurance for cargo carried on each one of those four classes of boats?—A. I see, in the first place, that the classification is wholly erroneous, because there are vessels put in the second class which ought to be in the first or select class. I also see that, in my judgment, the rates of premium charged on the vessels which carried the 19,500 head of cattle mentioned in my statement were wholly inadequate to the risk.

Q. At the same time, there is, as appears from that statement, a classification and a difference in the rate of insurance upon the different classes of vessels?—A. Undoubtedly; but I think that every vessel belonging to the Allan, and the Dominion, and the Beaver Line, which are in the first class, should be in the select class, and I think that every vessel of the same lines which are in the second class should be in the first class, or also in the select class.

Q. In other words, all the vessels of the regular liners had to be in the select class and all the outside vessels in the second or third class?—A. I speak only for the regular liners; I do not speak for the others vessels.

Q. You have said that there ought to be a larger rate of premium upon the other vessels. Now, I want to know in what class, upon that rating which has been presented to you (which Mr. Bond will file at the close of your evidence), would you put the outside vessels?—A. I am not prepared to rate outside vessels. What I am prepared to say is, that the records of the Allan, Beaver and Dominion Lines, showing their losses to be from nothing to a half of 1 per cent., clearly entitles them to a higher classification and a lower rate of premium than is shown in this statement.

Q. If you are not prepared to fix the classification on outside vessels, upon what principle do you assume that the rates quoted by the underwriters here are too low upon outside vessels?—A. That is a very delicate question. I am not prepared to state that. Inasmuch as the loss on the three regular lines of steamers I have mention has never exceeded one-half of 1 per cent., the insurance should be lower than on vessels whose loss was $4\frac{1}{2}$ per cent.

Q. Do you mean to say that the insurance men fixed their rates of insurance upon a proportion of loss that a particular vessel might have made? Is the rate not fixed upon the classification of the vessel? And if you, yourself, are not prepared to classify these outside steamers, why do you criticise the action of the insurance offices if they do something which you say you cannot do?—A. It does not belong to me to classify ships.

Q. Then you are not competent to criticise the members of the Board of Underwriters, whose business it is to classify ships?—A. I am perfectly competent. I know a great deal more about ships than the gentlemen who signed that statement. I know a great deal more about cattle and cattle fittings than they do, but I am not so cheeky as they are, and I am not prepared to come here and make an *ipse dixit* statement as to the correctness of what I do not know.

Q. It seems to me that their attempt to classify ships would be less cheeky than yours?—A. I am prepared to say that they fixed rates of premium which were

injurious and discriminatory against the other lines. I say that the ships which carry with trifling loss do not get fair play in this rating.

Q. You think that is a result of the rating in 1887?—A. No, sir; it is the result of previous years as well. I have a statement here for four years, which shows that the loss on the prominent line ships was in the same small proportion as in 1887.

Q. On what principle would you classify the regular line steamers?—A. If the regular line steamers during ten years only lost one-half of 1 per cent., and if the other steamers lost 4 per cent., I would make it proportionate to that loss.

By Mr. Smith :

Q. Are you of opinion that the ships of the three regular lines you have mentioned should all be in the select class?—A. Not only that, but they also should have a far lower rate of premium. The premium of the select class was too high, and the premium of the third class was too low.

By Mr. Greenshields :

Q. Did the insurance companies not form a close corporation in 1887, and did not some of the steamship companies prevent the cattle shippers from getting their insurance outside of the steamship lines?—A. The steamship lines formed no close combination.

Q. Did not the Allan boats refuse to quote a rate of freight without including insurance?—A. I believe the Ailan Line, after the year 1887, declined to quote rates of freight apart from rates of insurance. They required that the shipper on their ships should take the rate of freight from them.

Q. And the result was, that the cattle-shippers had no option but to take their insurance from the steamship companies?—A. Not at all; the cattle-shippers had the option not to ship if they did not wish to do so.

Q. If they did not take any insurance from the Allans they could get no insurance at all; and the result was, that the cattle shipper had to go to the Allan Insurance Company to get his insurance. Did not the Allan and Beaver Lines agree as to the rate of insurance?—A. No, sir.

Q. They had certain rates.—A. Yes.

Q. Were they cutting against each other?—A. They were doing as they pleased.

Q. They quoted the insurance and the freight together?—A. Yes.

Q. So that, if you wanted to ship on either of these three leading lines coming to this port you had to take your insurance with the freight rate, or not ship your cattle on them?—A. You need not ship your cattle on them if you did not like.

Q. And that placed the cattle men at the mercy of the regular line ships?—A. Not at all; the insurance men could collect any rates of premium they pleased.

By Mr. Allan :

Q. Is it not the case that in those years, when the shipper went to the steamship office, they quoted him a rate of freight that covered the insurance, and he took the policy if he so chose? If he did not like it he could take that rate of freight, and get his insurance anywhere he pleased?—A. Yes.

By Mr. Greenshields :

Q. Do you mean to say that the steamship companies were making a present of this insurance to the cattle men?—A. Yes, sir.

Q. A present of it to them?—A. Yes.

Mr. ALLAN.—Yes; because the steamship company did not have any mortality amongst the cattle and had nothing to lose.

Q. Did you not pay a premium to the Cattle Export Lloyds to insure them?—A. I understand that the Allans insured against total loss and general average.

Q. And mortality, too?—A. Probably that, too.

Q. You say that the Allans were insuring that risk in another insurance company and giving the policy for nothing to the cattle shipper?—A. The principle

was, that the ship gave insurance as well as conveyance, and guaranteed to land the animals in England or pay their value.

Q. Do you mean to tell me, as a matter of fact, Mr. Watt, that the fixing of these rates and the amount of money the Allans would have to pay on the losses was not taken into consideration?—A. I doubt if it was. The insurance was in the open market.

By Mr. Bond:

Q. Mr. Watt stated that our rating on the select boats was too high. Our rating in that statement I will file is quoted at $1\frac{3}{8}$. Did you not state that the mortality on the Allans was about one-half of 1 per cent.?—A. It was never more than that.

Q. Do you know the expense connected with the working of an insurance company here?—A. I have no knowledge of its details, but I do know that the insurance business has been managed through the Allans practically without expense.

Q. As to the agency business, we calculate that 5 per cent. of the premium goes into the expense of the agency and of the inspection, and of certain little details connected with the business. That would mean about 20 cents on the dollar. Added to that, you have to calculate the total loss and general average. Do you know what it costs to insure for a season out of this port the total losses and general average on a vessel?—A. I do not.

Q. Do you believe it would come to about 50 cents?—A. I think 50 cents would be a most preposterous share for vessels that lose from nothing to one-half of 1 per cent.

Q. Do you know the rate of insurance that would enable you to insure the total loss and general average of an Allan vessel for a season?—A. I am not aware.

Q. Do you believe it could be done for less than 50 cents for a season?—A. I could not hazard an opinion.

Q. Well, if you do not know, I can state that that is about the rate at which it can be done, and if you add the mortality, total loss and general average together, you will find that our rate of $1\frac{3}{8}$ is not excessive. I think you stated in your evidence that every one made mistakes, except the regular line steamship companies?—A. I stated that the records of the steamship companies showed that their skirts were clean, and the underwriters' record does not show that same carefulness in the discharge of their business.

Q. I have asked you questions about insurance, which you say you are not competent to answer. Do you consider that if you are not competent to form an opinion on details you are competent to form a general opinion on the subject?—A. I am quite competent to form an opinion as to the rates charged regular liners when compared with the rates of premiums charged on the outside steamers as exemplified in the statement made in 1887, during the existence of the insurance pool.

Q. You stated that one and three-eighths was too high on the select class of steamers?—A. I stated that the rating is too high on the regular steamers if the second and third class are reasonably rated. I am prepared positively to say that 1 per cent. or $1\frac{1}{2}$ per cent. is too high when the risk is proven to have ranged from nothing to the half of 1 per cent. I am quite sure that the underwriters did not charge a proper premium on the 20,000 animals shipped, among which the mortality was 4 per cent., if they fixed these other rates on the animals shipped, among which the mortality was only from nothing to the half of 1 per cent.

Q. You must admit that the gentlemen forming the Board of Underwriters, who have been in this business for a number of years, are supposed to have some knowledge as to the proper rates of premium that should be fixed?—A. I regret to say that they have not impressed me in that way, and that their business has been conducted to the cost of the ships, which carried their cattle with very little loss.

Q. Do you consider that this rating which I have shown you does not show that they exercise any discretion or wisdom?—A. Certainly not. My argument is, that the rate of premium was $1\frac{1}{2}$ per cent. up to 31st August on certain vessels, and that

they raised the premium in October from \$3.25 to \$3.75, and from \$5 to \$7. I think that these rates are not at all commensurate with the losses during these months.

Q. Still, you have admitted your total ignorance of the manner in which we have arrived at the rates which we applied, and which you claim we have applied wrongly?—A. I am not in the inner conscience of the underwriters, and I am not supposed to be. I have not had consultation with them on the subject. I want to call your attention to the differences set forth in this statement. They say, here, "select vessels $1\frac{1}{8}$ per cent. and first-class vessels $1\frac{1}{2}$ per cent." so that they allow the munificent sum of one-eighth of 1 per cent. for passing vessels from the first class to the select class. I see also here that vessels which lose from nothing to $\frac{1}{2}$ per cent. of the cattle they carry have to pay $1\frac{1}{2}$ per cent. premium, and vessels that lose 4 per cent. of the cattle they carry pay 3 per cent. premium. That is underwriting wisdom.

By Mr. Smith:

Do you approve of cattle being shipped in October and November?—A. I may say that the Allan Line held strong opinions on that subject in the early days of cattle shipment. They disapprove of deckloads in the autumn months, but the results since then have not borne out that opinion. So far as the regular lines are concerned, it has been shown that in October and November there are less losses than in June and July, and in June especially.

Q. So that now, you think there is no danger of cattle being carried on the upper deck late in the fall?—A. I am not quite prepared to say that. I have never made a voyage in a cattle ship, and I have got no personal experience of it; but taking the record as the guide, the October and November shipments are not to any very large extent greater in losses than the shipments in August and September.

By Mr. Greenshields:

Q. Do you know that it frequently occurs here that the rates of freight are not obtained by the cattle shipper until the animals are on board ship?—A. It not infrequently occurs that arrangements for cattle and for general cargo are made without any fixed rate being named at the time the space is engaged, and that the current rate is fixed at or about the date of the sailing of the ship.

Q. Is it not a fact that a cattle shipper cannot get his rates very frequently, and he puts his cattle on board and gets his bill of lading and rate of freight when the ship is down the river?—A. I dare say that is not unlikely with regard to cattle and other cargo.

Q. Then he has got to pay whatever the steamship obliges him to pay?—A. He has the option of not making his contract until the rate is fixed. I may explain, in this connection, that certain commodities, notably cattle and provisions, and to some extent sack flour and packages generally, have their rates of freight fixed from time to time by the steamships, and that these rates are current from week to week, and are alterable at pleasure.

By Mr. Smith:

Q. The underwriters have recommended that a sea-faring man should be appointed to inspect the loading of ships with cattle. Have you any opinion about that?—A. The ship-owners have expressed their willingness that the loading of cattle should be placed under Government regulation, somewhat in the same form that the loading of grain is now placed. The ship agents do not think the seaworthiness of a ship is in any degree at peril in consequence of the loading of cattle, and that the proposed regulation had better come in the form of an amendment to the Port Warden Act. There is really very little difference between the importance of grain-carrying and cattle-carrying, and of the two, probably the grain-carrying is the more important, and grain carrying has long ago been placed within the jurisdiction of the port warden's office with the best results. The ships are of opinion

that the extension of the Port Warden Act to cattle would be the simplest mode of reaching this point. A competent assistant port warden would be, in my opinion, the best man to carry out these regulations. The multiplication of offices is objectionable, and the whole of the machinery is now in existence at the port warden's office and can be very easily utilized with respect to cattle-carrying as well as to grain-carrying. My individual opinion is, that a competent navigator, who had been to sea and had experience in the management of ships, would be a proper man to undertake the duties, if he is otherwise qualified. I presume that regulations having the force of law would be made, after discussion, by competent authorities. I think the rules should be promulgated by Orders in Council, subject to revision by the responsible Minister. The details of these regulations are a matter for consideration and for conference by the parties interested.

Q. What is your opinion about the recommendation that cattle-carrying ships should be lighted by electricity?—A. There is a good deal to be said on both sides in reference to that. The danger of fire is considerable from electric wires. I do not know that any ships have been set on fire by cattle men carrying lamps, but I do know that ships have been set on fire by electric wires. I think that the erection of permanent fixings on the hurricane decks of ships is, to put it mildly, inadvisable. I do not think the record shows there is any occasion for it.

Q. Have you any opinion as to the space which should be allowed each animal?—A. It seems to be generally admitted that 2 feet 6 or 2 feet 8 would be sufficient space. If there are four animals in a crib. I think 2 feet 6 would be sufficient for each animal; but I speak under reserve on this point.

Q. Do you think there should be a rule made as to the prohibiting the loading of cattle during certain hours of the day?—A. It would be an extremely onerous rule, both on the cattle-shipper and on the ship. I do not think it would be advisable to make that rule.

Q. Do you think it should be a rule that no live stock should be loaded on a vessel until the dead cargo is loaded?—A. It would be difficult to make a rule of that kind. I understand that it is very often the object of the shippers to get their cattle into England for a specific market, and a rule of that kind might delay the ship.

Q. Do you think the cattle men should be on the articles of the ship?—A. I am unable to speak as to that. I have read the proceedings of these meetings very carefully, and I notice that certain sensational statements were made regarding the treatment of cattle men on board ships. It would seem to me fair that the ships should have an opportunity for rebutting that testimony. The ships are not here now, but I have not the slightest doubt that if the ship's side of the story were heard your mind regarding the matter would be disabused. The supplies given to these ships are of excellent quality, and few or no complaints have ever been made respecting these men and their treatment. I think many of these men are unacclimatized, and they suffer from sea-sickness. It is a matter for the Government to consider whether they shall inspect, and classify, and license cattle men. It certainly is in the interest of the cattle-shipper and the ship-owner and the Government that the men should be competent men, and I have no doubt that competent men can be got to take charge of cattle for reasonable wages.

This concluded the evidence of the witness.

JAMES THOM, Freight Manager for the Beaver Line of steamers, gave the following evidence:—

The object of the investigation is, as I understand, to produce evidence to show that the statements made by Mr. Plimsoll and the work published by him are exaggerated, and it is not the intention to put the steamship owners on the "rack," and have them cross-questioned in all kinds of ways. The experience I have had in the cattle business includes the ports of Portland, Boston, New York and Baltimore, and it strikes me that the system of loading cattle on board the steamers from lighters is

better than the present system we have in the port of Montreal. I believe that it would be very difficult to have a union stock yard in Montreal, and I do not think there is any necessity for it. The Grand Trunk have a stock yard at one end of the city, and the Canada Pacific Railway at the other; and either the stock yard company or the cattle-owners will have to provide lighters to lighter the cattle from Hochelaga or Point St. Charles. I think the American system of loading is much better than ours, because our cattle here have to be driven down to the wharf. Loading from the cars is a very good system; still, I am inclined to prefer the lighter system as followed out in New York, if it is practicable here. Of course, as Mr. Watt has said, the regular line-steamship companies are anxious to adopt any system which will be for the benefit of the trade. I am quite sure that they are ready to adopt any suggestion which may be made, and which can be carried out, which will improve the trade. They are anxious to make the best record they can as carriers of cattle, because it means that the better their record the better demand there will be for the space.

By Mr. Smith :

Q. You have heard the recommendations made by the Board of Underwriters and by the Dominion Live Stock Association? What do you think of those suggestions?—A. The suggestions made by the underwriters are made entirely from their point of view, and I think it is better to leave the underswriters alone to conduct their business. With reference to the accommodation which should be allowed to each animal, I may state that the space allowed here is 2 feet 8 inches by 8 feet. In New York, where the animals are larger, as a general rule, than Canadian cattle, the ships allow a space of 2 feet 6 inches for each, or four cattle in the space of ten sheep.

Q. Are any cattle shipped from the States and allowed a space of 2 feet 8?—A. Not on our boats; and of course I can only speak as to the space allowed on our steamers.

Q. Do you only allow a space of 2 feet 6 inches here?—A. 2 feet 8 inches is the regulation here. There has been no question about the stalls erected for cattle in the port of Montreal. I think the stalls, as put up here, are better than those from almost any other port, because I believe the material is better, and there is more labour expended on them. As regards the attendants to take charge of the cattle, the rule in New York is to allow one man to 30 animals, and in Montreal they allow on man to 25 animals. The steamship agents prefer to take all the men the cattle exporters wish to send, because it is our interest to turn the cattle out in as good a condition as we possibly can. We have got to give a passage across to all men furnished by the cattle-owners within the limit of one man to 25 animals. There has been a great deal said here as to the treatment of these attendants on board ship. I might say that, some few years ago, on the recommendation of the Live Stock Association, and at a meeting we held with them, they undertook to supply a better class of men if utensils and bedding were supplied by the steamship companies. The Beaver Line has carried out this part of the contract, and always supplied the men as desired.

Q. Would you recommend that the cattle men on board ship should sign the articles of the ship?—A. That would be a matter of secondary consequence, in my opinion. The principal thing is to get the cattle-owners to supply a better class of attendants. I have been at the ports of New York and Baltimore for the nine last years, and we have never had a single complaint from cattle men leaving these ports. We do all we can for the cattle men in the port of Montreal, but they do not seem to be satisfied. If the cattle men are satisfied with the same accommodation from New York I do not see why they ought not to be satisfied here. I am generally the first to hear complaints when the cattle men return from England, and if any serious complaints were made the officers of the vessel would be examined and dealt with, if they were guilty of any harshness to the men. We have never had any complaint that could be verified. Each cattle man gets a blanket and a straw mattress and is supplied with all utensils. I now file a statement of the live stock carried from Mon-

trealt to Liverpool by the Beaver Line from 13th May to 29th November, 1889, and also statement of live stock carried by the Beaver Line for two years, and showing the loss for each month:—

STATEMENT of Live Stock carried from Montreal to Liverpool by Beaver Line, from 13th May to 29th November, 1889.

Date of Arrival at Liverpool.	Steamers.	Shipped.		Landed Alive.		Landed Dead.		Overboard.		Landed.	
		Cattle.	Sheep.	Cattle.	Sheep.	Cattle	Sheep	Cattle	Sheep	Calves	L'imbs
1889.											
May 13.	Lake Nepigon ...	314		314							
do 18.	Lake Superior...	689		686				3			
do 26.	Lake Winnipeg..	409		408				1			
June 3.	Lake Huron.....	486		484		2					
do 7.	Lake Ontario.....	401		401							
do 16.	Lake Nepigon....	315		314				1			
do 22.	Lake Superior...	716		709				7		1	
do 30.	Lake Winnipeg...	425		423		1		1			
July 5.	Lake Huron.....	424	714	424	700		2		12		3
do 12.	Lake Ontario.....	39		39							
do 23.	Lake Nepigon ...	281	312	281	310				2		2
do 26.	Lake Superior...	563	1,451	561	1,444	1		1	7		
Aug. 3.	Lake Winnipeg...	293	1,235	293	1,217		2		16		2
do 10.	Lake Huron.....	343	1,447	343	1,446				1		2
do 16.	Lake Ontario.....	44		44							
do 24.	Lake Nepigon ...	242	689	242	688				1		
do 30.	Lake Superior...	683	240	683	239				1	1	
Sept. 7.	Lake Winnipeg...	555	467	554	451		1	1	15		
do 14.	Lake Huron.....	655	719	638	681	5	5	12	33	1	
do 20.	Lake Ontario.....	619	460	616	460	1		2		9	
do 29.	Lake Nepigon ...	279	390	279	370		6		14		
Oct. 3.	Lake Superior ...	649	269	649	268				1		2
do 12.	Lake Winnipeg...	560	516	552	508	2	1	6	7		
do 18.	Lake Huron.....	369	1,076	369	1,074				2	1	
do 25.	Lake Ontario.....	333	1,189	331	1,180	1		1	9	2	
Nov. 4.	Lake Nepigon ...	295	249	286	246	1		8	3		
do 8.	Lake Superior ...	413	405	412	400	1			5		
do 18.	Lake Winnipeg...	352	523	352	480		5		38	1	
do 29.	Lake Ontario.....	275	511	274	507	1			4		
	Totals.....	12,021	12,862	11,961	12,669	16	22	44	171	18	9

Average loss on cattle, 0·37 per cent., or 37 per 10,000.
do sheep 1·33 do or 13 per 1,000.

21, WATER STREET, LIVERPOOL,
31st December, 1889.

STATEMENT of Live Stock carried for Two Years by Beaver Line, and showing Loss for each Month.

Month.	Cattle.		Sheep.		Percentage for Year.	
	Carried.	Died.	Carried.	Died.	Cattle.	Sheep.
1888.						
May.....	1,219					
June.....	2,750	5				
July.....	1,329	1	1,904	9		
August.....	2,200	2	2,308	31		
September.....	1,565	1	6,216	64		
October.....	1,233	2	5,852	59		
November.....	686	3	1,665	27		
Totals.....	10,982	14	18,945	190	0·13	1·05
1889.						
May.....	1,412	4				
June.....	2,243	9				
July.....	1,307	2	2,454	21		
August.....	923		3,590	19		
September.....	2,891	15	1,962	62		
October.....	1,911	6	3,030	19		
November.....	1,335	8	1,633	50		
Totals.....	12,022	44	12,669	171	0·37	1·33

E. & O. E.

D. H. CAMPBELL.

CANADA SHIPPING COMPANY,
MONTREAL, 7th January, 1891.

Q. Do you know the causes of the losses as given in these statements?—A. That I cannot tell.

Q. Do you insure the cattle along with the freight, and include the insurance with the freight?—A. We have insured the cattle, but we do not do it now.

Q. You let every owner of stock do his own insurance?—A. Yes. With regard to the question of the payment of the freight for the cattle landed, I may say that my views have been fully expressed by Mr. Watt, and I entirely agree with him that the steamers are entitled to the freight for every animal loaded once it goes on board.

By Mr. Greenshields :

Q. Would that include the total loss of the vessel?—A. We have had no total losses on our vessels.

By Mr. Watt :

Q. Is it not a fact that there is great difficulty in driving cattle through the crowded streets, and that there is another great difficulty in bringing them down to be loaded from a crowded wharf?—A. Yes.

By Mr. Greenshields :

Q. Now, Mr. Thom, when you did your own insurance on the Beaver Line, did you make your insurance a present to the cattle men?—A. I think we had better not go into that subject, because I do not think it is a matter that concerns the underwriters in any way. Our freight was a certain price, and they took it or left

it, just as they liked. The whole Atlantic coast was open to them to ship cattle wherever they liked. I do not think this is a matter that concerns the investigation.

Q. At all events, you did away with the system?—A. We did away with the system, but I do not think the reasons were as you suppose.

To Mr. SMITH.—I think there should be an inspector to look after the loading of cattle, the food for the cattle, the cattle fittings, and so on, and in my opinion this inspector's office should be attached to the port warden's office.

This concluded the evidence of the witness.

Captain JOHN ANDREW MACMASTER, ex-Master Mariner and Master Stevedore on the Montreal Wharf, gave the following evidence:—

By Mr. James Allan :

Q. Captain Macmaster, you have navigated the St. Lawrence for a considerable time?—A. Yes ; for several years in my own vessel.

Q. It has been suggested that there should be a special wharf set apart at which cattle could be loaded on the steamers. Would you state your opinion on the question of moving steamers from one wharf to another in the harbour?—A. In the present state of the harbour, it would be quite impracticable to move ships from one wharf to another.

Q. What are the reasons against this?—A. The current is too strong and the channel too narrow.

Q. Do you consider it would be dangerous?—A. Yes ; it would be very dangerous for the ships.

Q. Would it not lead, in all probability, to a blockade of the harbour during the whole season?—A. There would be probabilities of collisions and of running ashore, and other casualties. It would be altogether impracticable, so far as the business of the port is concerned.

Q. I suppose, it frequently occurs that a number of vessels are loading cattle at the same time?—A. Yes ; sometimes five steamers or more are loading cattle at the same time, and they could not all go down to the same wharf. There would be a great loss of time if they all loaded at the one wharf.

By Mr. Smith :

Q. Would not the system of carrying cattle by lighters to the vessel obviate any difficulty in this direction?—A. There would be no blocking the channel, at all events.

Q. Have you seen cattle loaded from lighters in New York?—A. I have seen them loaded from lighters in New York.

Q. How does the system work there?—A. I believe it works very satisfactorily ; but, of course, they have much more room in New York. I think it is much better to load cattle on board ship from lighters than to have the steamer go to a special wharf.

Q. Is it practicable to load steamers from lighters in the port of Montreal?—A. Yes ; there would be no difficulty on account of the current. Lighters could be very much more easily handled than an ocean steamer, and could be towed up the current.

Q. Do you think that cattle are subject to any more danger on the upper deck than between decks?—A. No ; I think they are better off on the upper deck than they are down below. I have crossed the ocean two or three times in winter, and the cattle were all right. Then, again, I have crossed the Atlantic and the animals got killed down below, when they were all right on the upper deck.

Q. Were they killed below for want of air?—A. I do not think that was the reason of their being killed. I believe there was ventilation enough. The cattle died—that was all I know about it.

Q. Have you any suggestions to make as to the better carrying on of this trade?—
A. I am not interested enough commercially in the trade to make any suggestions. I think the fittings as at present erected are sufficient for the trade, and I do not think that angle-iron frames with 2-inch plankings would be an improvement, because it would possibly make the ship tender and overweight her. It is just a question whether any fittings should be put on the deck that would be sufficiently strong to stand a heavy sea.

Q. Did you ever hear of any cattle being thrown overboard at sea on account of stress of weather?—A. I never heard of any live cattle being thrown overboard.

Q. Do you think that the men in charge of the cattle should sign articles on board the ship?—A. I think they should have competent men in charge of the cattle, and I think it would be better, possibly, if they signed articles. The men who go in charge of cattle would be no use on board the steamer, because the captain wants men whom he knows are competent to handle the ship. I know that when I first went to sea we were not so very well treated on the ship. We got £5 a year, and had to find our own plates and all utensils we used on board.

Q. Were you indentured?—A. Yes; I was indentured, and we got no butter on our bread, as the cattle men do.

This concluded the evidence of the witness.

The following interview with Mr. Plimsoll, being a clipping from the *New York Tribune*, was filed on behalf of the shipping interest:

“TO STOP AN INHUMAN TRADE—EVILS OF CARRYING CATTLE IN SHIPS—SAMUEL
PLIMSOLL’S VIGOROUS EFFORTS—HE SHOWS THE NEEDLESSNESS OF THE
PRESENT SYSTEM.

“The *Tribune* has persistently protested against the abuses and cruelties of the trans-Atlantic cattle trade, and it was with pleasure, therefore, that a *Tribune* reporter met a man yesterday who is labouring as earnestly in behalf of dumb brutes as he has for mankind, and whose name is known on both sides of the Atlantic as a philanthropist and a reformer. He is Samuel Plimsoll, the friend of the British seaman, the protector of Jack Tar, whatever his nationality, a member of Parliament for years, and a guest of the American people whenever he takes it into his head to cross the Atlantic. A sail across the ocean is nothing to Mr. Plimsoll, except, perhaps, a loss of time, for he is a steam engine of energy and vigour in spite of his white hairs. He arrived here on Thursday, and since then he has been busily engaged in enlisting the sympathies of cattle, beef and steamship men, and others interested in such matters, in a movement to abolish the business of shipping live cattle across the ocean for beef. Mr. Plimsoll believes that it would be more humane, and no more expensive, to do the killing here and ship the beef afterward. He is eloquent, persistent and convincing. A difficulty means to him simply something to be overcome. He vehemently protests against the butchering and torturing of cattle which the trans-Atlantic cattle traffic is guilty of, and in the two days that he laboured here he has been encouraged to believe that he has already met with promising success.

“‘As soon as I got the load-line law enacted last year’ he said, ‘which was introduced in 1876, and afterwards emasculated, I went to work on a Bill to prohibit the traffic of carrying live cattle between England and other countries. The Bill was introduced in the last session, which was so far advanced that the Bill was not passed. But a committee was appointed to take evidence on the question, and it has made such satisfactory progress that a measure will be passed when Parliament re-assembles after its vacation that will either absolutely prohibit the traffic or regulate it. I gave my testimony before the committee a fortnight ago, and prepared to come to New York city, in order that I might study the question in all its phases. I want to thank the *Tribune* for the grand, good work which it has done to arouse public opinion on this question,

and create a strong sentiment against the traffic in live cattle. I hope myself to do something to stir up the public sentiment here, but we must all strive to educate the people to the necessity of abolishing this barbarous business. I hope to see Congress pass a law for that purpose, for the moral sense of the American people is strong. I have called on the President of your grand Society for the Prevention of Cruelty to Animals, and found that the society had recently taken steps to arrest a man who was guilty of cruelty to cattle on ship-board. But people who have not seen the sufferings of the poor brutes cannot tell what agonies they endure. They are packed in the hold, between decks and on deck. Sometimes the steamers are loaded down so heavily that in port the vessels sway. Think of the torture of the poor brutes in a storm, with seas breaking over them, knocking them together, and sometimes sweeping them overboard. Why, men have told me that they have seen cattle so violently jammed against the bulwarks of a steamer in a gale that their legs were ground off, while other wretched brutes were trampled to a jelly on the deck. Sometimes they are crowded together so tightly that cattle lying down would be trampled to death, and to prevent this fires are lighted under the cattle, or paraffine put in their ears. It was anything to keep them up on their feet, anything to save their flesh. This is horrible and inhuman. It would be more humane, and perhaps would pay better in the end, to transport the beef than live stock.

"I am now acquainting myself with the various systems of cooling beef. The ammonia method gives perfect control of temperature, so that the beef can be shipped without difficulty or danger of loss or injury. Moreover, beef does not occupy so much room as live stock. A steamer that carries 600 head of live cattle could accommodate 1,000 cattle in beef; so that steamship lines would incur no pecuniary loss. I have been told that your ranche men and your beef men would oppose this movement, but to-day I talked with T. C. Eastman, your great beef man, the first who shipped beef to England, and he said that it would be all one to cattle men whether the cattle were shipped as live stock or beef, and he encouraged the movement for reform on humane principles. Indeed, I have met with no discouragement, but much encouragement. There is no sense to the present system. A cattle ship looks like a peripatetic agricultural show yard."

"Mr. Plimsoll is staying at the Gilsey House. He will sail for England about the middle of January.

ALEXANDER CHAMBERS, Farmer, of River Beaudette, Que., gave the following evidence in reply to Mr. James Allan. He said:—

I have crossed the Atlantic twenty-one times with cattle, and I generally left from the port of Montreal. I crossed principally on the Allan Line of steamers, but I have also crossed on the Dominion and Thompson Lines. I went across as foreman in charge of cattle.

By Mr. Smith:

Q. Did you cross in charge of your own cattle?—A. No, sir; I crossed eight times in charge of cattle owned by Mr. Hickson, of the Grand Trunk, now Sir Joseph Hickson. I crossed once with cattle belonging to Mr. Aiken, and once with cattle belonging to Mr. Flanagan.

Q. What is your experience as to how the cattle men are treated on board ship?—A. The cattle men were treated very fairly on any ship I ever crossed on.

Q. What sort of accommodation was afforded them?—A. There was a blanket and a palliass filled with straw supplied them, and they had very good provisions on the ship.

Q. What do you say as to the food that was furnished?—A. The food was always what I should call good food. I never heard any of the men grumble to me about it.

Q. Have you ever eaten the food supplied to the cattle men yourself?—A. I have sometimes, in rough weather, when we were working hard. If the foremens' food was not ready I have eaten the other men's food.

Q. Is it not a fact that in a storm you and your men would prefer to sleep near the cattle rather than leave them?—A. I have seen the underhands take their blankets and sleep on the straw instead of their berths. In cold weather, of course, I would prefer the berth. I have seen them take the blanket and sleep on the hay in warm weather, and I have done so myself.

Q. They had no reason to complain of the berths?—A. They had no reason, whatever.

Q. Did the steamships furnish the men with utensils to have their meals?—A. Yes; the ship furnished them with all utensils.

Q. You never heard your men complain of bad treatment, or bad food, or bad accommodation?—A. I never heard any of the men that I went with complain.

Q. Do you think it would be an improvement on the present system to make the cattle men sign articles?—A. I do not think it would make a great deal of difference. The men are always willing to go over with cattle, and if they had any complaint to make they generally went to the captain, and they were always satisfied with what he said to them. Sometimes, if they complained to the other officers of the ship they did not get satisfaction, but they generally got it when they went to the captain. My experience is, that the captain generally did what he thought was right.

Q. Did you ever find that cattle men on board ship were sea-sick and unable to do their work?—A. I have seen some of them a little sea-sick, but still they could get around to do their work.

Q. Did you ever know of a cattle man going across on a voyage who was not able to do his work?—A. I never met any of that kind.

Q. What class of men do you generally take? Are they farmers' sons?—A. Some of them were farmers' sons. We employ the men on the wharf, who are accustomed to go over with cattle, and I prefer them before strangers, or before farmers' sons, because the latter sometimes get sick. It is only in rough weather that we need really good and experienced men to take charge of the cattle, for it is then that we have the hardest work. In rough weather they require to be up night and day, and it is far more difficult than in fine weather. I would always prefer to employ the regular cattle men who are engaged in this business.

Q. In your experience, have you always had plenty of ventilation for the cattle between decks?—A. We generally have good ventilation, but I have seen the ship heat up a little at certain points.

Q. Do you think it would be a good idea to keep a thermometer between decks, so that the heat would be known?—A. It would be a very good thing, but sometimes the vessel would heat in certain places while it may be cold in other places.

Q. Did you have steam fans in the vessel that you crossed in?—A. I went to Quebec in ships that carried the steam fans as far as Quebec.

Q. Did they put the steam fans ashore at Quebec?—A. Yes.

Q. Had you always plenty of light on board the ship to attend to the cattle?—A. Yes, sir; the ship provided all the lamps we wanted. I cannot exactly say that it would be necessary to have electric light on board cattle ships, because the ships that I went over in were well lighted. There was always a man to take care of the lamps, and we had only to take the lamps to him in the morning and go to him for them in the afternoon and they were ready for us.

Q. Did you find that cattle suffered on the upper deck from the spray dashing over them?—A. Sometimes, when it was very stormy, I should think that the cattle were a little cold from the spray; but still they always ate their food well and laid down after doing so.

Q. Even in the storm, they would take their food and lie down?—A. Yes; the cattle were always ready for their food on the spar deck. The cattle seemed to be healthiest on the spar deck, because they seemed to eat their food better; but the animals on the other decks were in very good condition.

This concluded the evidence of the witness.

WILLIAM CUNNINGHAM, of the City of Montreal, Cattle Exporter and Secretary of the Dominion Live Stock Association, gave the following evidence:—

By Mr. Greenshields:

Q. Are you interested in the shipment of cattle?—A. Yes; I represent certain firms in Great Britain, and handle some of the cattle for them. I also inspect cattle ships for some insurance companies.

Q. You see nearly all the cattle ships before they leave the port of Montreal?—A. Yes; I see most of them.

Q. Will you please state what you have got to say about the facilities for handling cattle here, and as to whether there is any cruelty to the animals on board ship? A. I endorse entirely the recommendations of the underwriters and the Dominion Live Stock Association with regard to every vessel carrying cattle having steam fans on board, and as to all dead cargo being put on board the ship before the cattle are ordered down from the stock yards. I also believe that no fodder for the animals should be put on the top of the cattle pens. I wish particularly to call the attention of the Commissioner to this fact. Several times during the last few years I have had occasion, as inspector for insurance companies, to raise strong objections to this system of putting fodder on top of the cattle pens, and I have had to bring Dr. Baker down on two or three occasions in order to prevent it. I do not refer now to the steamers of the Allan, Dominion or Beaver Lines. I do not inspect for the Allan or Dominion Lines, because they do their own insurance; and on the Beaver Line everything has been satisfactory. We have no complaint to make with regard to the space they allow the cattle or with regard to the manner in which they carry the fodder. But on the Reford Line we have had trouble. Mr. Reford is so anxious to crowd all the cargo he can into the holds of his vessels that he wants to put the hay and the fodder for the animals on deck. I know of an instance this year where the hay got wet in the Gulf of St. Lawrence, and on account of it being saturated with salt water the animals refused to eat it. The cattle were landed in bad condition, and sold on the other side at a loss to the shipper. I think that this practice of putting hay on the top of the stalls is injurious to the stalls and injurious to the animals.

Q. What is your opinion about putting cattle on the hatches?—A. The Government Inspector, who may be appointed, should look after that. Whatever regulations are made, I should say that they should be made stringent, and that there should be nothing left to his discretion. The moment you leave any power in the hands of the inspector great influence is brought upon him, and as he is human, like other people, he might be persuaded. I think the regulations should be set down so that they cannot be altered. In regard to the loading of the cattle on the hatches, I do not say that we should have a positive rule about that. It has been mentioned here that one steamer came to this port with hatches 26 feet long. I think that a vessel like this should carry cattle on part of the hatches, but that she should leave 12 feet of the hatch clear. I maintain that 12 feet of every hatch should be left clear. I think this is a very important matter, and I believe, besides, it would have a very beneficial effect on the ventilation between decks. Very often they carry too many cattle on the hatches.

By Mr. Smith:

Q. So you approve of a vessel having an extraordinary large hatch being allowed to carry cattle thereon?—A. Yes; if a vessel has a hatch 26 feet long she might carry cattle on 14 feet of that hatch, but she should leave 12 feet clear. That would leave space to put water barrels out and to bring out sick cattle if necessary. Suppose an animal broke its leg on the voyage, the cattle men would take the animal out of the hatch and kill it, so as to prevent it from suffering. I know that the cattle attendants take this course in such an emergency, so as to prevent the animal from suffering, notwithstanding what Mr. Plimsoll says in his book.

Q. Does the blocking of the alleyways with fodder and other things injure the ventilation of the ship?—A. It certainly does. Every alleyway should have 2 feet clear. I have noticed on some occasions food and other things stored in the alleyways, and I made complaint about it, and it was removed.

Q. You think the alleyways should have 2 feet clear?—A. Yes; the alleyways should be 2 feet clear of all obstructions. I would recommend that the stalls for the cattle should be 2 feet 8 inches by 8 feet clear, and the stanchions should not be counted in this space, as some ship-owners do at present. Each animal should have 2 feet 8 inches, clear of all obstructions. Fat cattle need every inch of a space 2 feet 8 inches by 8 feet.

Q. We are told that in New York and in other American ports they ship them in a space of 2 feet 6 inches?—A. Yes; I have seen them so shipped. I do not know but that 2 feet 6 inches is probably sufficient space for others than fat cattle, but if you make a rule, you should put the space at 2 feet 8 inches, and apply it the whole season. If the animals have plenty of space it gives a man a better chance to attend to them in a storm, and the cattle do better with plenty of space. I would suggest a space of 2 feet 8 inches for each fat animal, and the placing of five "stockers" in the place of four fat cattle.

Q. Do you think steam fans would be desirable?—A. Yes; I think if every cattle-carrying boat had steam fans it would prevent a good deal of loss. I endorse Mr. Nathan Kennedy's recommendations with regard to the facilities for loading cattle at the port of Montreal. If we had barges to take the cattle direct from the stock yards it would remedy every difficulty we labour under. It may be ten or twelve years before we get so far advanced as that, but the sooner it comes the better.

By Mr. Telfer, Manager of the Grand Trunk Stock Yards:

Q. Is it not a fact that they can load the cattle on those lighters from the Grand Trunk stock yard at Wind Mill Point?—A. I do not know about that; but if the cattle have to be driven from the yards to Windmill Point and then have to be loaded on lighters I think the exporters would as soon drive the animals down to the wharf at once and load them on the ship. If there was a place where they could go direct from the yards to the lighter I would say, by all means have lighters to carry cattle to the ship; but if you have to drive the animals to the lighters, load them on the lighters, and then unload them on the ship, there would be a great deal of injury to the cattle. I think Mr. Kennedy's suggestion, that there should be a third railway track on the wharf, would be the best means of remedying the present difficulty of loading cattle. I would much prefer Mr. Kennedy's suggestion than to load cattle on the lighters and then transfer them to the ship.

By Mr. Smith:

Q. The Harbour Commissioners have stated that there is no room for a third track until the new harbour improvements are carried out.

MR. KENNEDY.—There is less difficulty in loading from the cars, and I am quite safe in predicting that there will be no lighterage for the next four or five years.

MR. CUNNINGHAM.—We want some improvement which we can get at once. During the last three years I have been on the wharf day and night during the loading of cattle, and I think for that time I have had as much experience as any man in the business. I am in favour of anything that would remedy at once the evil of having so many cattle on the wharf at the same time and the great confusion which necessarily arises on that account. I think Mr. Kennedy's plan, to bring the cattle down to the cars, if it is possible, and load them on the boats between 6 o'clock in the evening and 8 o'clock in the morning, is much better than carrying them down in lighters. I have seen the cattle suffer very much from getting mixed up with the other cargo, such as rails and scrap iron lying on the wharf; whereas, if they came down by cars, the same as the North-West and distillery cattle do now, they could be put direct on the steamer and suffer no hardship. I think if a rule were

made that the cattle should not be brought down to the wharves except between 6 o'clock at night and 8 o'clock in the morning it would satisfy every one. I would leave the inspector as much power as possible in regard to this matter. I differ with the other witnesses as to what kind of a man the cattle inspector should be. Dr. McEacharn, the Veterinary Inspector, has charge of a large part of this business now, and I would make the cattle inspector an assistant to him in any way you like; but I would have him directly responsible to the Government at Ottawa for seeing that the regulations are enforced. I think that if Dr. McEacharn or some assistant under him had regulations made as to the loading of cattle he would carry them out well. I think this would be much better than multiplying offices.

Q. What do you think about a rule being made that every vessel carrying cattle should have electricity?—A. I think it would be a vast improvement. The cost of providing electric light is a question for the steamship companies, and I think, if they did provide it, it would save them a considerable amount of money for purchasing oil and supplying lamps. I think it would be worth the additioned expense of fitting the electric light up in the steamers.

Q. Have you made a passage across in a cattle ship?—A. Yes, sir; I have crossed with cattle from this port.

Q. Did you see the cattle well taken care of?—A. Yes, sir.

Q. At what time of the year did you make this passage?—A. In the winter time.

Q. Were the cattle on the upper deck in comfortable quarters?—A. The cattle were well taken care of all through the ship. We had quite a stormy passage, but there was only one bullock lost, and that one broke its leg. We pulled the animal into the hatch and killed it there. When they dressed the carcass they found the meat was bruised, and they threw it overboard, and kept the skin and the other parts of the animal for salvage for the insurance companies.

Q. What is your opinion as regards the treatment of the men on board these cattle ships?—A. I cannot speak as to that, because I did not pay any particular attention to it. The evidence given as to the treatment of cattle men on board the ships has astonished me very much. I think they should have made these complaints long ago. If they had, the Dominion Live Stock Association, I am quite sure, would have enquired into the matter.

Q. Do you think that the cattle sheds erected at present on the upper decks are sufficiently strong for rough weather?—A. I do not think they are strong enough. I may state that there was evidence taken in England in regard to the steamship "Linda." I chartered that boat myself and loaded her here, and I believe she was black-listed in England because the captain was an inexperienced man in the cattle carrying trade. Previous to the "Linda" leaving this port there was an objection made to her insurance. The captain was one of the worst men I ever saw coming into the port of Montreal, and I had an idea in my mind that he would not land the cattle safely. I think if there had been a bill of lading in that case, where the ship would only have been paid on the number of cattle landed alive, there would have been a great many more cattle saved. The "Linda" has gone out of this port, and she is not going to carry cattle any more. If you look up her class on Lloyd's register, and if any man inspects her, I believe he would come to the conclusion that the "Linda" is well equipped for the trade. I think a great deal as regards the safety of the cattle depends upon the experience of the captain in charge of the ship. The ventilation on the "Linda" was as good as the ventilation on any steamer coming to the port of Montreal, except those that are fitted up with steam fans. If anyone condemned the "Linda" for not having sufficient ventilation he would condemn a great many boats that come here. The forward part of the "Linda" was fitted with a ventilator the full width of the hatch. It was about 2 feet wide, and was made of solid iron. It was none of those booby ventilators, but a genuine ventilator, so that whether in stormy or fair weather it could be kept open at all times. Behind No. 2 hatch she had a bell-mouth ventilator, so that there was a general current of air through the "Linda." In the centre of the ship was another large ventilator, such as I have described. There are very few ships coming to the port of

Montreal better ventilated, than the "Linda." All this goes to prove that no matter how well a vessel is ventilated unless she has steam fans and "up take" ventilation the foul air cannot be carried away. In the case of the "Linda" the ventilators was considered perfect; and if it were not perfect all the insurance inspector had to do was to say, I want more ventilation, and it would have been supplied. On the "Straits of Magellan," which met with an accident, there were five extra ventilators put in. I may state that we can order the ventilation to be made more perfect on transient vessels than on a regular liners, and I might say that there are several transient vessels just as good for carrying cattle as the regular liners. The steamship "Oxenholme," which has been mentioned during the course of this enquiry had as good a record for carrying cattle as any vessel leaving this port. However, all the underwriters are down on her, but she carries cattle across and does not lose anything. It is not the mortality amongst the cattle they are afraid of on the "Oxenholme," but she is not classed in Lloyd's. The "Linda" was perfectly inspected at this port. She is classed A-1 at Lloyd's, is a large vessel, a fast vessel, and I believe ought to be a good vessel for carrying cattle.

Q. The Oxenholme is not classed?—A. No.

Q. And I suppose the underwriters are afraid she would go to the bottom?—A. The underwriters are afraid that, if she met with any slight accident, she would go to the bottom. They put the insurance higher on her than on other vessels.

Q. Did you charter the "Linda"?—A. I had to do with the loading of her. I believe that the captain complained in his evidence in England that there were only seven cattle men on board to look after the animals, but I went to Mr. Reford's office and got the facts, and I saw the men going on board myself, and I think there were either fifteen or seventeen men on board, as well as two foremen. The captain, in his evidence on the other side, said there were only seven cattle men, and that this was the reason the loss occurred.

Q. It might have been a misprint in the account which you read. He might have said seventeen, but it was printed seven?—A. At all events, she was black-listed, and it was said she was not suitable for carrying cattle. I loaded the "Linda" in Quebec with cattle, and I believe she was as good a boat for carrying cattle as ever left the port. The fittings on the "Linda" were double the strength of the ordinary fittings, even on some of the regular liners. They were the strongest fittings I ever saw on any vessel going out of the port, and yet they did not stand the storm.

Q. Do you think that it would be better to have those stalls fitted up with angle-iron frames and 2-inch planks?—A. I think it would be a great improvement. They would be first-class fittings, provided the captain is a careful man and nurses his ship during the progress of a storm. If the ship has those permanent fittings and if the captain takes an interest in the cattle-carrying trade and takes care of the cattle, he ought to be able to land them safely on the other side, in any weather.

Q. What do you think was the cause of the loss on the "Straits of Magellan"?—A. The "Straits of Magellan" was fitted up with the ordinary fittings, the same as on the regular lines of steamers, but they were not as strong as the fittings on the "Linda." There was a heavy sea shipped by the "Straits of Magellan," and it swept both fittings and cattle overboard. I had an objection to the "Straits of Magellan" when she was in port here. She had no bulwarks on the forward part, and I thought she could not carry cattle there. Now, Mr. Commissioner, I wish to say one or two words with regard to the suggestion that steamships should only be allowed to collect freight on the animals they land alive. From the evidence given by Mr. John McLennan on behalf of the steamship owners and agents it was clearly shown that the loss of cattle on the regular lines was only one animal out of every two hundred and sixty-six carried. I claim that, this being the case, it would be no hardship to the regular liners to make a bill of lading, so that freight would be paid only on the animals landed.

Mr. SMITH.—I do not think that a Government rule could compel them to do that.

Mr. CUNNINGHAM.—Well, if that is the case, there is no use saying anything more about it, because they will not do it if there is not some regulation about it. I

believe that it would make the captains of transient vessels, and the regular liners as well, take more care of the cattle. Now, I want to refer to the practice of the steamship owners including the insurance of animals with the freight.

Mr. SMITH.—They say they do not charge you for the insurance on the freight.

Mr. CUNNINGHAM.—And the same remark would apply: that we do not charge them for the men or for the fodder that we give the cattle. It is only a subterfuge on their part. If you cannot make a regulation to prohibit steamship companies doing their own insurance you ought to be able to do so. I say that this principle of steamship companies insuring the cattle is wrong. If they can do the insurance for the cattle exporters they ought also to be able to provide the fodder for the cattle. In many cases the insurer does not get all the insurance he wants on his cargo, and it would place the shipper in a very anomalous position in case of the total loss of a vessel. The payment of a claim is left in the hands of the insurance company, and since the "Montreal" was wrecked at Anticosti they have a clause across their certificate, so that if any other boat was lost in a similar position they would deduct the cost of the freight from the insurance money. If the cattle exporter were insured in any outside company he could collect his full insurance. I say that the exporter should do his own insurance, because he knows as well how to do it as the steamship companies can do it for him.

By Mr. Rielle, Advocate (who appeared on behalf of the Dominion Live Stock Association, in the absence of Mr. Greenshields, Q.C.):

Q. Have you any figures to give as to the growth of the cattle export trade from this port?—A. The export of cattle from this port has doubled itself in two years. There were 60,000 head of cattle shipped from this port in the season of 1888, and in the season of 1890 there were 123,136 head of cattle and 43,372 sheep. This is more than double what the trade was in 1888, and it represents an export trade of about \$11,000,000 between Canada and Great Britain, and nearly \$2,000,000 of that goes to the steamship companies for freight.

Q. Have you any views to offer as to the manner in which cattle are loaded on board ship here?—A. I think whatever loss occurred last summer it was caused by the present system of shipping cattle *en bloc* on the wharf. I think that the animals were injured before they went on board, and that some deaths were due to that reason.

Q. So that, in your opinion, the injury caused to the animals was caused before they were put on board ship?—A. Yes; I think that is the cause, and I think that could be remedied if we had better accommodation.

Q. Have you read the book published by Mr. Plimsoll?—A. Yes; I did; and the statements contained therein are not true as regards the cattle trade from this port.

Q. Have you read the report of the interview with Mr. Plimsoll, purporting to be an extract from the *New York Tribune*, 21st December, 1890, which has been filed at this enquiry, and in which Mr. Plimsoll is reported to have made certain statements regarding the cruelty of cattle in this export trade without referring to the source of his information?—A. Yes.

Q. Do you consider the statement in Mr. Plimsoll's book and in that newspaper report to be well founded?—A. Probably Mr. Plimsoll had seen the letters in the newspapers which he refers to, and they may be well founded, as far as he is concerned; but I do not believe that a single word of the statements, either in the book or in the newspaper publication, are true as regards the Canadian trade. I do not think that Mr. Plimsoll or anybody else can prove a single word of the statements in that book to be true with regard to the Canadian cattle trade. I am quite sure that not one word of that could be proven on oath.

J. HENRY SMITH, of the City of Montreal, representative in Canada and the United States of John Swan & Sons, Live Stock Agents, Glasgow, Edinburgh, Perth and Aberdeen, gave the following evidence:—

I have represented the above firm for the last eleven years in Canada. During the past season (1890) we have handled about 20,000 cattle from this country, three-

quarters of which have been sold to farmers for fattening purposes. Throughout the whole year we are receiving orders from the principal feeders and grazers, not only all over Scotland, but in England as well, to supply them with large numbers of Canadian "stockers." It is now a well known fact to every farmer on the other side who has had any experience in fattening Canadian cattle that these take on beef much more rapidly than either Irish or Scotch cattle, and therefore pay better. When I was in Scotland last winter store stock was quite as dear per pound, live weight, as fat cattle, and many of the farmers told me that they would not buy any store cattle until after May, when they could get plenty good cheap Canadian cattle. If this "stocker" trade was put an end to I consider that it would be ruinous, not only to the Canadians, but to the Scotch and English farmers as well.

I agree with the cattle exporters who are in favour of a Government Inspector. I think the space for each animal ought to be 2 feet 8 inches by 8 feet; 2 feet 6 inches may be room enough for the greater proportion of our Canadian cattle, but there are often extra heavy bulls and oxen shipped, which would be more comfortable in 2 feet 8 inches. I have often shipped cattle of this class for customers weighing considerably over a ton.

Fans for ventilation I think very necessary in stormy weather, when the hatches have to be battened down.

In some cases the hatches are very large, and I should consider it a hardship if ship-owners were not allowed to load cattle on the hatches under these circumstances. I would suggest that 12 feet be allowed for accommodation to men in charge, ventilation &c., and the balance of the hatch fitted with stalls. I have seen hatches 26 feet long. I endorse Mr. Cunningham's views on this subject, that no cattle ought to be put on board before the steamer has completed the loading of the other cargo. Live stock should be the last cargo put on board.

The only cruelty I have ever witnessed in connection with this trade has been on the wharf when cattle and other cargo have been loading at the same time. This has been caused by trucks and teams driving through the cattle and in many cases seriously injuring them. I attribute some of the losses between here and Quebec to this system of loading. Union stock yards and a separate wharf for loading cattle would, I think, be a great improvement.

Extra strong deck fittings after September are advisable. I have had very little experience with tramp steamers, and after September I endeavour to take space for my customers on the largest and most substantial ships I possibly can. The larger the steamer is, if well fitted and ventilated for the trade, I consider the safer she is for carrying live stock.

I have had considerable experience in engaging the men in charge. We have a lot of first-class foremen, many of whom have been in the business longer than I have. If the shipment does not number less than 20 to 30 cattle I generally give them in charge of a good foreman, who, with his other men, looks after them. If the number exceeds 30 or 40 I generally engage the underhands as well as the foreman, and give them an order on the consignors for payment on the other side. I also send a letter by the foreman to Messrs Sawn & Sons, instructing the latter to send me a letter by foreman, stating in what condition he lands his stock, which, if not satisfactory, I take good care that he does not return for me.

I have never had very many complaints from men as to board and accommodation on board ship, but I believe that, for the underhands, this might be improved.

I have weighed cattle at the Grand Trunk Railway stock yards here and again at Edinburgh, after they have been rested at Glasgow, and found the shrinkage to be from 10 to 20 lbs. each. In some cases, I believe, cattle improve on the voyage.

Attention ought to be drawn to the treatment of Canadian cattle after arrival on the other side. Several complaints have been made by the consignees of Canadian cattle during the past season as to this.

Assistants only ought to be put on the ships' articles, not the foremen, and in this way the foremen could attend to their cattle without being interfered with by the captain.

To show that the cattle are treated worse when they arrived in England than they are in Canada, I will read the following letters:—

“EDINBURGH, 25th September, 1890.

“Professor McCALL, Glasgow.

“DEAR SIR,—We desire to call your attention to the scandalous treatment to which cattle arriving at Shieldhall are subjected to. We took a lot of Ross-shire farmers down there last night, and the state of the lairs was such as to engender disease. Our friends were surprised at the manner in which cattle are treated there; and, seeing the dues which are charged, it appears to us that there is no wonder that cattle are sent elsewhere. If you look at the cattle after standing a quarantine of twelve hours you will see that our complaint is a reasonable one. There is a man in charge of the gate, distinguished for his incivility. When our Mr. Thomas called him to account, in presence of a number of gentlemen who were there to buy cattle, his conduct was most insulting.

“Will you kindly interest yourself in regard to remedying this grievance.

“Yours truly,

“(Sgd.) JOHN SWAN & SONS.”

“EDINBURGH, 6th November, 1890.

“Professor McCALL,

“Veterinary College, Buccleuch Street, Glasgow.

“DEAR SIR,—We beg to call your attention, knowing that in doing so it will be immediately attended to, to the manner in which cattle are being treated at Shieldhall from the time of landing until they are passed by you. Our cattle this week are reported to have been, while under the supervision of the authorities, without any attention, and to have stood actually in filth. Our Mr. Thomas had not an opportunity of being at Shieldhall this week, but he is in a position to say that between the unshipping of the cattle and the delivery from the quarantine wharf that they were received as a lot in very bad condition. From various quarters we have had reports that Canadian cattle are being affected with congestion of the lungs, which in some cases may be pronounced Pleuro. As you can well understand, if cattle are landed out of a warm hold and placed in a shed at Shieldhall, with no bedding, except their own droppings, that they must contract complaints which may be erroneously pronounced. Another complaint we have to make to you is, that the pavement of the place being flat and saturated with the excrement of the animals, they, the moment they are untied, slip, fall and injure themselves. This must be apparent to you.

“The outcome of this falls into a recommendation in which you will agree. You have the power to dictate to the local authority what we, as consignees, wish, and that is, that the lairage should be raised in front of the animals and the whole asphalt ribbed, in order that the cattle, when being untied, should not, as they at present do, slip and get damaged.

“Kindly let us hear from you in regard to this.

“Yours truly,

“(Sgd.) JOHN SWAN & SONS.”

Mr. BOND, on behalf of the Board of Marine Underwriters, presented the following to the Enquiry:—

“MONTREAL, 10th January, 1891.

“The Honourable Commissioner of the Cattle Trade Enquiry, Montreal.

“DEAR SIR,—In connection with the extracts from the regulations of the Cattle Underwriters' Association of 1887, and in further connection with Mr. Watt's evidence, that they did not use discrimination in the conduct of their business, I submit, in the first place, copy of the policy of the Cattle Export Lloyds of Canada,

showing the members composing that Lloyds, and in substantiation of the statement that this Lloyds was composed principally of the members of the Allan firm, and I now affirm that this company was one of the association referred to in the document of rates and regulations, and their representative had a full say in everything that transpired. The association was formed of five representative underwriters, each representing one or more insurance companies. Each underwriter furnished one cattle inspector, who formed a Board of Inspectors. Upon the evidence received from them and upon the experience of the underwriters themselves were these rates and regulations based. I would point out that the association declined nine vessels that they thought were unfit to carry cattle, and I would say that many others would have been submitted only they knew they would certainly be declined. Therefore, they were not placed before the association. I further submit that the statement shows that twenty-seven vessels were restricted in some special manner and that seven changes of ratings from one classification to another took place.

"That the underwriters did not lose sight of the humanitarian question is shown on page 8 of the statement, which is more amply explained in other documents submitted by the underwriters giving full detail.

"You will notice that on pages 8 and 9 some exceedingly high rates are given for deck loads. These were purposely placed high, with the intention of making them prohibitory.

"In answer to Mr. Watt's claim that 1½ on selected vessels was excessive, I would point out that to ascertain the net charge for the mortality risk there would have to be about 20 cents for agency charges, inspectors' fees and sundries, and about 50 cents for the total loss, general average and special charge insurance, which would leave about 67½ cents to cover the mortality—surely not an excessive amount to remunerate an insurance company for the risk taken, even although the rate of mortality does not exceed 45 or 50 cents.

"In reply to Mr. Watt's statement that the underwriters did not charge enough on the outside vessels, I can only say every vessel was carefully discussed on its merits. Many more restrictions were placed on the transient vessels than on those of the regular lines, and what we deemed an equitable rate, having all the circumstances before us, was arranged.

"I would therefore submit that the evidence submitted would show that the underwriters exercised discretion to the best of their ability, and is quite contradictory to the sweeping assertions made by Mr. Watt.

"Yours faithfully,

"ED. BOND."

No.....

CATTLE EXPORT LLOYDS OF CANADA.

\$.....

JACKSON RAE, *Attorney.*

The members of the Association of the Cattle Export Lloyds of Canada, each in proportion to his share in such Association, in consideration of the payment of the agreed premium, the receipt whereof is hereby acknowledged, do hereby insure for account of _____ head of _____ of equal value, for _____ dollars, per steamer _____ from _____ to _____ against all risk arising upon the said voyage; each animal to be deemed covered by a separate insurance, but no claim (except general average) to attach under this contract, in respect to any animal landed alive.

Loss, if any, payable to _____ or order, in the City of _____ upon the surrender of this contract, and upon the production of the usual and customary proof of loss, and vouchers.

The assured warrants that the risk is free from any loss or claim on account of capture, seizure, detention or destruction, by or arising from any belligerent nation, or by, or from any officer, civil or military, or any person claiming to act in their name, or under their authority, or in their behalf.

The assured warrants that the animals are shipped in a sound and healthy condition, and that competent men shall accompany the animals, and that in case of the death of any animal such disposition shall be made of the carcass as to realise the fullest salvage for the benefit of the insurers.

In witness whereof, the undersigned, as the agent of each of the said members, under procuration executed before Edward W. H. Phillip, Notary, copy whereof is deposited in my office, open to reference by the assured, has executed these presents on their behalf respectively at Montreal, this day of 188 .

.....Attorney.

ANDREW ALLAN,	J. M. BROWNING,
H. MONTAGU ALLAN,	JAMES J. RILEY,
HUGH A. ALLAN,	JAMES ELLIOT,
R. A. SMITH,	GEORGE HAGUE,
JOHN S. ALLAN,	M. HEATON,
A. A. ALLAN,	JONATHAN HODGSON,
BYRCE J. ALLAN,	JOHN CASSILS,
WILLIAM RAE,	JOHN HOPE,
F. WOLFERSTAN THOMAS,	JOHN MACFARLANE.
J. H. PLUMMER,	

ASSOCIATED CATTLE UNDERWRITERS OF MONTREAL, 1887.

COPY OF CLASSIFICATION, RATINGS AND REGULATIONS.

RATES FROM OPENING OF NAVIGATION TO 26TH JULY.

	CATTLE.			
	Farmers.		Distillers.	Sheep.
Selected vessels	13 ³ / ₄ per cent.	..	13 ³ / ₄ per cent.	3 per cent.
1st class	13 ³ / ₄ do	..	2 do	3 do
2nd class	13 ³ / ₄ do	..	2 do	3 do
3rd class	2 do	..	Special.	4 do

Classification.

Selected.	First Class.	Second Class.	Third Class.
Carthaginian,	Buenos Ayrean,	Nestorian,	Grasbrook,
Siberian,	Norwegian,	Lucerne,	Erl King,
Lake Superior,	Circassian,	Waldensian,	Cremon.
Lake Huron,	Hibernian,	Scandinavian,	
Alcides,	Grecian,	Prussian,	
Lake Ontario.	Corean,	Texas,	
	Manitoban,	Canadian,	
	Montreal,	Phœnician,	
	Toronto,	Quebec,	
	Dominion,	Mississippi,	
	Ontario,	Lake Nepigon,	
	Concordia,	Colina,	
	Cynthia,	Escalona,	
	Lake Winnipeg.	Barcelona,	
		Avlona,	
		Dracona,	
		Ocean King,	
		Kehrwieder.	

Any vessel not quoted above must be specially rated.

These rates may be applied from week to week only, as they are subject to alteration.

Opening of Navigation.)

Rates.

SS. "Ocean King"	Rating suspended.
SS. "Thanemore"	Be left for special rating after this trip.
SS. "Bonnington"	Farmers', $2\frac{3}{4}$ per cent.; distillers', 3 per cent. No distillers under deck.
SS. "Ashburne"	Farmers', 2 per cent.; distillers', 3 per cent. No distillers under deck.
SS. "City of Lincoln"	Farmers', $1\frac{3}{4}$ per cent.; distillers', 3 per cent. No distillers on lower deck.
SS. "Corona"	Farmers', $2\frac{1}{4}$ per cent.; distillers', 3 per cent. No distillers under deck.
SS. "Katie"	Farmers', $1\frac{3}{4}$ per cent.; distillers', 3 per cent. No distillers on lower deck.

(31st May, 1887.)

Rates.

SS. "City of Truro"	Farmers' cattle on and under deck, $2\frac{1}{4}$ per cent.; distillery "on deck only," 3 per cent. No distillery under deck to be insured.
SS. "Canopus"	Rate reduced to $1\frac{3}{4}$ per cent., in consideration of her not calling at Sydney, C.B.

(27th May, 1887.)

Rates.

SS. "Castleford"	Farmers', $1\frac{3}{4}$ per cent.; sheep, 4 per cent.
SS. "Gratitude"	do 2 do do 4 do

(23rd May, 1887.)

Rates.

SS. "Titania"	*Farmers', $1\frac{1}{4}$ per cent.; distillers', 3 per cent.; sheep, 4 per cent.
SS. "Castledale"	Farmers' $2\frac{1}{4}$ do do $3\frac{1}{2}$ do do $4\frac{1}{2}$ do (Subject to inspector's approval regarding ventilation.)
SS. "Barcelona"	Rating suspended until inspected.
SS. "Gallina"	Farmers', $2\frac{1}{2}$ per cent.; distillers', $3\frac{1}{2}$ per cent.; sheep, $4\frac{1}{2}$ per cent. On deck only.

* In this case only, freight £3 per head at mortality rates.
(6th June, 1887.)

Rates.

SS. "Thorndale"	Farmers', $2\frac{1}{4}$ per cent.; distillery, $3\frac{1}{4}$ per cent.
-----------------------	--

(8th June, 1887.)

Rates.

SS. "Grasbrook"	Distillery cattle, 3 per cent. On deck only.
-----------------------	--

(11th June, 1887.)

Rates.

SS. "Straits of Gibraltar"	Farmers', $2\frac{1}{2}$ per cent.; distillery, $3\frac{1}{2}$ per cent. On deck. Under deck rate held over until inspector's recommendations are carried out. No distillery cattle to be insured under deck.
SS. "Mississippi"	Forward part steerage deck subject to inspector's approval.
SS. "Dunholme"	Declined.
SS. "Comte d'Eu"	do

On all vessels sailing on and after the 13th instant, calling at Sydney, C.B., an additional rate of $\frac{1}{8}$ per cent. to be charged.
(14th June, 1887.)

Rates.

SS. "Wandrahm"	Distillery, on deck only, $3\frac{1}{2}$ per cent. After this date the "Wandrahm" and "Baumwall" will be declined.
SS. "Erl King"	Transferred to 3rd class.
SS. "Scotland"	do
SS. "Carlton Tower"	*Farmers', $2\frac{3}{4}$ per cent.; distillery, $3\frac{3}{4}$ per cent. (<i>via</i> Sydney). No cattle to be carried forward of look-out bridge.
SS. "Washington City"	*Farmers', $2\frac{1}{2}$ per cent.; distillery, $3\frac{1}{2}$ per cent. (<i>via</i> Sydney). No distillery cattle under deck.

* The above rates include the extra $\frac{1}{8}$ per cent. for calling at Sydney.
(23rd June, 1887.)

Rates, &c.

After this date no distillery cattle will be insured, except on steamers of the following regular lines:—The Allen, Dominion, Beaver, Donaldson, Temperley ("Scotland" and "Erl King" excepted), Thomson Line ("Barcelona" excepted), and in the Furness Line, the "Katie" and "Boston City" only.
Rating of the 23rd instant stands good for present trips only.

SS. "Oxenholme"	Farmers', $2\frac{1}{4}$ per cent.; distillery, $3\frac{1}{4}$ per cent., as a special case. All to be loaded on two decks only.
-----------------------	---

(24th June, 1887.)

Amended Rating.

After the 1st July and until further notice the rate on distillery cattle will be as follows :—
By selected vessels.....2½ per cent.
By 1st class and 2nd class.....2½ do

(29th June, 1887.)

Rates, &c.

SS. "Thanemore".....Farmers', 1¾ per cent. ; distillery, 2½ per cent. ; sheep, 5 per cent.
SS. "Cootherstone" and "Bombay".....Declined.
Sheep.—From this date rate will be : on selected steamers, 4 per cent. ; 1st and 2nd class, 5 per cent.
Vessels other than selected, 1st, 2nd and 3rd class, as per list and amendments, will, until further notice, be declined. Under exceptional circumstances vessels may be passed, but must in every case come before the Committee.
(5th July, 1887.)

Rates.

SS. "Thorndale".....Farmers', 2½ per cent. ; sheep, 5 per cent.
SS. "Lismore".....Declined.
(15th July, 1887.)

Rates, &c.

SS. "City of Lincoln".....Cattle, 2½ per cent. ; sheep, 5 per cent.
SS. "Canopus".....do 2½ do do 5 do
SS. "Katie".....do 2 do do 5 do
In the event of any shipper requiring more than \$7.50 a head on sheep, such concession may be granted through the Secretary only.
From date to 30th September this Association will decline to insure shipments of American cattle.
(19th July, 1887.)

Rates from 1st September until further Notice.

Selected vessels	Farmers' Cattle.	Sheep.
	1½ per cent.	4 per cent.
1st class	1½ do	5 do
2nd class	1½ do	5 do
3rd class	2½ do	6 do

Classification.

Selected.	1st Class.	2nd Class.	3rd Class.
Carthaginian,	Buenos Ayrean,	Nestorian,	*Grasbrook,
Siberian,	Norwegian,	Lucerene,	*Erl King,
Lake Superior,	Circassian,	Waldensian,	*Cremon.
Lake Huron,	Hibernian,	Scandinavian,	
Alcides,	Grecian,	Prussian,	
Lake Ontario.	Corean,	Texas,	
	Manitoban,	Canadian,	
	Montreal,	Phœnician,	
	Toronto,	Quebec,	
	Dominion,	Mississippi,	
	Ontario,	Lake Nepigon,	
	Concordia,	Colina,	
	Cynthia,	Escalona,	
	Lake Winnipeg,	Barcelona,	
	Pomeranian,	Avlona,	
	Assyrian.	Draconia,	
		*Ocean King,	
		Kehrwieder,	
		Glamis Castle.	

On and after the 10th September, 1887, deck loads may not be insured on the vessels marked ().
Any vessel not quoted above must be specially rated. These rates may be applied from week to week only, as they are subject to alteration.

Valuations.

Cattle should not be insured beyond 80 per cent. of their value.
Sheep limited to \$7.50, but in cases of extra value permission may be obtained through the Secretary or additional insurance.
(26th July, 1887.)

Rates.

SS. "Navarro".....Cattle, 2½ per cent. ; sheep, 5 per cent.
SS. "Cremon".....do 2 do do 5 do
(26th July, 1887.)

Rates.

SS. "Bonnington".....Declined.
SS. "Straits of Gibraltar".....Farmers' cattle, 2½ per cent. ; sheep, 5 per cent.
SS. "Oxenholme".....do 2½ do do 5 do
(10th August, 1887.)

Rates.

SS. "Thanemore" Farmers' cattle, $1\frac{1}{4}$ per cent.; sheep, 5 per cent.
(12th August, 1887.)

Rates.

SS. "Glamis Castle" Cattle, $1\frac{3}{4}$ per cent.; sheep, 5 per cent.
(17th August, 1887.)

Rates.

SS. "Lake Ontario" is removed from the Special List, and will hereafter rank under 1st class.

On and after the 1st September rates will be advanced to the following:—

	Cattle.	Sheep.
Selected vessels	$1\frac{1}{2}$ per cent.	4 per cent.
1st class	$1\frac{3}{4}$ do	5 do
2nd class	$1\frac{3}{4}$ do	5 do
3rd class	$2\frac{1}{4}$ do	6 do

On and after the 10th September deck loads may not be insured on the following vessels:—"Ocean King," "Erl King," "Scotland," "Grasbrook" and "Cremon."
(23rd August, 1887.)

Rates for the Week ending 18th September.

	Cattle.	Sheep.
Selected vessels	$1\frac{1}{2}$ per cent.	4 per cent.
1st class	$1\frac{1}{4}$ do	5 do
2nd class	2 do	6 do
3rd class	$2\frac{1}{4}$ do	Declined.
"Thorndale"	$2\frac{1}{2}$ do	6 per cent.

No sheep placed in the neighbourhood (on and under) of the funnel or fiddling will be insured
(6th September, 1887.)

Rates.

SS. "Canopus" Sailing on or before 25th instant.
Cattle. Sheep.
3 per cent. on deck. 6 per cent.
4 do under deck.

(8th September, 1887.)

Rates for Week ending 25th September.

	CATTLE.		SHEEP.	
	Under.	Under I. C.	On Deck.	
Selected vessels.....	2 per cent.	$2\frac{1}{2}$ per cent.	$2\frac{1}{2}$ per cent.	5 per cent.
1st class	$2\frac{1}{4}$ do	3 do	3 do	6 do
2nd class	$2\frac{1}{2}$ do	$3\frac{1}{2}$ do	No deck load.	Declined.
3rd class	Decline unless specially rated.			
SS. "Nestorian"	Under, $2\frac{1}{2}$ per cent.; on, $3\frac{1}{2}$ per cent. limited deck load; sheep, 6 p.c.			
SS. "Scotland"	Declined for balance of season.			
SS. "Thanemore"	If sailing week ending 18th September: Cattle, $2\frac{1}{2}$ per cent. on and under I. C.; sheep, 6 per cent.			
	If sailing week ending 25th September: Cattle, $2\frac{1}{2}$ per cent. under; 3 per cent. on and under I. C.; sheep, 6 per cent.			

(13th September, 1887.)

Rates for Week ending 2nd October.

	CATTLE.		SHEEP.	
	Under.	Under I. C.	On Deck.	
Selected vessels.....	2½ per cent.	3 per cent.	3½ per cent.	5 per cent.
1st class	2¼ do	3¼ do	3¾ do	6 do
SS. "Katie".....	2½ per cent. under; no deck load.			
SS. "Canopus".....	3 do	do	Sheep on 'midship bridge, 6 p.c.	
SS. "Pomeranian".....	Placed in the 1st class.			
SS. "Glamis Castle".....	do	2nd do		
(20th September, 1887.)				

(20th September, 1887.)

At a special meeting it was agreed to insure the following deck loads:—SS. "Ocean King," 50 spaces, single tier pens for sheep only, to be located subject to Messrs. Bowden and Leslie's inspection. Rate, 6 per cent.

SS. "Katie." Shipments to be strictly limited on both decks and 'tween deck lots, subject to Messrs. Tenney and Coughlin's inspection. Rate: Cattle, $2\frac{1}{2}$ per cent. under; $3\frac{1}{2}$ per cent. on; sheep, 6 per cent.
(22nd September, 1887.)

Special Rating.

Messrs. Tenney and Riley are appointed a special committee to locate and limit space to be insured on the deck loads of these steamers:—

SS. "Cremon" Cattle on deck, 5 per cent.

SS. "Canopus" do do

(26th September, 1887.)

Special Rates.

Re "Clamis Castle."—In view of a misunderstanding that existed regarding the deck load of this vessel, Messrs. Rowden and Leslie were appointed a special committee to report on same. The report being favourable, the vessel rates as follows :—

	CATTLE.		On Deck.	SHEEP.
	Under.	Under I. C.		
	3 per cent.	3½ per cent.	4 per cent.	6 per cent.
SS. "Cremon".....	Cattle, under deck only, 3 per cent.			
(26th September, 1887.)				

Rates for Week ending 9th October.

	CATTLE.		On Deck.	SHEEP.
	Under.	Under I. C.		
Selected vessels.....	3 per cent.	3½ per cent.	4½ per cent.	5 per cent.
1st class.....	3½ do	4 do	Declined.	Declined.
2nd class.....	4 do	4½ do	do	do
SS. "Oxenholme".....	4 do		8 per cent.	8 per cent.

The resolution declining deck loads is hereby rescinded. Vessels may now be accepted subject to the regulations and approval of the inspectors, each steamer to be rated on its merits, but the minimum rate on cattle to be 5½ per cent. on 1st class and 8 per cent. on 2nd class.

DECK LOADS SPECIALLY PASSED.

	Cattle.		Sheep.
	per cent.	per cent.	
"Concordia".....	6	6	6 per cent.
"Dominion".....	6 do	6 do	
"Toronto".....	6½ do	6½ do	
"Avlona".....	8 do	8 do	
(28th September, 1887.)			

Rates for Week ending 16th October.

	CATTLE.		On Deck.	SHEEP.
	Under.	Under I. C.		
Selected.....	3½ per cent.	3¾ per cent.	5 per cent.	5 per cent.
1st class.....	3¾ do	4½ do	Declined.	Declined.
2nd class.....	4½ do	5¼ do	do	do

DECK LOADS.

	Cattle.		Sheep.
	per cent.	per cent.	
"Montreal".....	6¾	6¾	6 per cent.
"Buenos Ayrean".....	5½ do	5½ do	
"Colina".....	7 do	7 do	
"Corean".....	6 do	6 do	

The SS. "Lake Ontario" is hereby placed in the selected class.

(4th October, 1887.)

Special Rate.

SS. "Oxenholme," sailing week ending 16th October.—Cattle : under deck, 5 per cent. ; on deck, 10 per cent. ; sheep, 10 per cent.
(7th October, 1887.)

Rates for Week ending 23rd October.

	CATTLE.		On Deck.	SHEEP.
	Under.	Under I. C.		
Selected.....	3½ per cent.	4 per cent.	5¼ per cent.	5½ per cent.
1st class.....	4 do	4¾ do		
2nd class.....	4¾ do	5½ do		

DECK LOADS.

	Cattle.		Sheep.
	per cent.	per cent.	
"Ontario".....	7	7	7 per cent.
"Assyrian".....	6½ do	6½ do	

The "Assyrian" is placed in 1st class.

	CATTLE.		On Deck.	SHEEP.
	Under.	Under I. C.		
SS "Thanemore".....	4¾ per cent.	5½ per cent.	8 per cent.	8 per cent.
SS. "Grasbrook".....	Declined.			
(11th October, 1887.)				

Rates for Week ending 30th October.

	CATTLE.		On Deck.	SHEEP.
	Under.	Under I. C.		
Selected.....	No sailings.			
1st class.....	4¼ per cent.	5 per cent.		
2nd class.....	5 do	5¾ do		
SS. "Thorndale".....	4¼ do	5½ do		
SS. "Erl King".....	6 do			

DECK LOADS.

	Cattle.	Sheep.
	8 per cent.	8 per cent.
"Lake Winnipeg"	8 do	8 do
"Grecian"	10 do	10 do
"Dracona"	10 do	10 do
"Escalona"	9 do	9 do
"Thorndale"	15 do	15 do
"Erl King"		

On deck space to be limited and approved of by inspectors.

The attention of the Inspectors is again called to the circular of October 11, in reference to valuation. (18th October, 1887.)

CIRCULAR *re* SS. "KEHRWIEDER."

"It having come to the knowledge of the members of this Association that animals were jettisoned unnecessarily, alive, from the SS. "Kehrwieder," it was decided that the names of the foremen in charge of the various lots of animals which were thus thrown overboard alive during the vessel's last voyage from this port be ascertained, with the view of declining to write on any shipments under their charge hereafter, and that their names be communicated to all interested. And it is the unanimous decision of the members of this Association that animals under their charge hereafter shall not be insured by any members of this Association; and, further, that the members of this Association do not consider that the officers of the vessel are free from blame in permitting live animals to be thrown overboard; and that, therefore, no live stock be written by any member of this Association on this vessel until after this matter be settled satisfactorily to this Association."

(20th October, 1887.)

Rates for Week ending 6th November.

CATTLE.

	Under Deck.	Under I. C.
Selected	No sailings.	
1st class.	4½ per cent.	5 per cent.
2nd class.	5 do	5½ do

DECK LOADS.

	Cattle.	Sheep.
	8 per cent.	8 per cent.
"Ontario"	10 do	10 do
"Prussian"	15 do	15 do
"Texas"	10 do	10 do
"Nestorian"	8 do	8 do
"Cynthia"	10 do	10 do
"Escalona"		

(25th October, 1887.)

Rates for Week ending 13th November.

CATTLE.

SHEEP.

	Under.	Under I. C.	On Deck.	
Selected	4 per cent.	4½ per cent.	6½ per cent.	6½ per cent.
1st class.	4½ do	5½ do		
2nd class.	5½ do	6 do		
"Thorndale"	5 do	5½ do		

DECK LOADS.

	Cattle.	Sheep.
	9 per cent.	9 per cent.
"Toronto"	9 do	9 do
"Concordia"	16 do	16 do
"Quebec"	16 do	16 do
"Mississippi"	10 do	10 do
"Thorndale"		
"Carthaginian"	Decline "well deck" forward.	

(1st November, 1887.)

Special Rating—Week ending 6th November.

CATTLE.

SHEEP.

	Under.	Under I. C.	On Deck.	
Selected vessels.	4 per cent.	4½ per cent.	6½ per cent.	6½ per cent.

(2nd November, 1887.)

Special Rating.

SS. "Cremon," to Aberdeen, sailing prior to 20th November.—Cattle: under deck, 5½ per cent.; no deck load. (4th November, 1887.)

Rates.

SS. "Cremon."—Extension of rate on this vessel is to the 16th November only; if sailing after that date, additional rate must be charged.

SS. "Barcelona."—Sheep, under iron cover, 9 per cent.

SS. "Kehrwieder."—This Association having heard the report of the statements of the captain and mate of the vessel, have decided to accept risks on cattle by her. Rate: under deck, as per 2nd class; deck load, 16 per cent.

SS. "Cynthia."—Deck load, for week ending 13th November, 9 per cent.

(7th November, 1887.)

Rates for Week ending 20th November.

	CATTLE.			SHEEP.
	Under.	Under I. C.	On Deck.	
Selected vessels.....	4½ per cent.	4¾ per cent.	6¼ per cent.	6¾ per cent.
1st class.....	4¾ do	5¾ do		
3rd class.....	5½ do	6¾ do		

DECK LOADS.

	Cattle.	Sheep.
"Montreal".....	9 per cent.	9 per cent.
"Concordia".....	9 do	9 do
"Buenos Ayrean".....	8 do	8 do
"Pomeranian".....	8 do	8 do
"Quebec".....	16 do	16 do
"Mississippi".....	16 do	16 do
"Dominion".....	9 do	9 do

(8th November, 1887.)

H. C. TELFER, of the City of Montreal, Manager of the Montreal Stock Yarp Company, gave evidence as follows:—

I would suggest, in the first place, that each animal should have not less than 2 feet 6 inches by 8 feet space, clear of stanchions or other permanent ship fixtures. The floors should be raised at least 4 inches and should be well cleated. I think also that troughs ought to be built on board ship for watering the cattle. There should be 2 feet clear alleyways in front of cattle, without obstructions of any kind, at all times. All fittings should be completed, hay, feed and general cargo should all be put on board, cattle stalls should all be bedded and racks filled with loose hay, before the cattle go on the ship. There should be one foreman on the ship for every 250 cattle or any part of 250 cattle. The foreman should be on board ship for at least twelve hours before the cattle are loaded, and the ship should bear the expense of the meals of those men when on the ship.

Q. Should cattle men sign the ship's articles, in your opinion?—A. Providing they are not compelled to do seaman's duty, they should. The foreman should live in the second officers' quarters, and should have full charge of the feeding and watering of the cattle. Each foreman should be licensed by the Government Inspector on the recommendation of the cattle owners, and be deprived of his certificate by the inspector for proper cause. I would suggest also that they should keep a log-book, in so far as the interests of the cattle are concerned. Head ropes should be ¾-inch thick and 8 feet long, and should be upon the horns of the animals before the vessels leave port.

The space should be allotted by the ship's agent and a certificate given to each shipper for the same. The inspector should give a certificate when the vessel is ready to receive cattle, and no cattle should be allowed on the wharf without the order of the inspector. This would prevent crowding and holding cattle on the wharf, which is now done, for fear the cattle might be unable to be taken on board and be left for another steamer. Another advantage of this allotment certificate would be the proper stowing of feed and hay convenient to the cattle to which it belongs. There should be a compulsory regulation for a supply of feed and hay. The quality of both meal and hay should be rigidly inspected, as some shippers are in the habit of putting on meal that cost \$23 per ton, while others put on meal that costs but \$20. The surplus feed and hay landed on the other side should be accounted for by ships and pro-divided. The inspector should be empowered to inspect the facilities for supplying the cattle with water, and enforce certain requirements.

I think that freight should be paid on cattle landed or not landed, especially in case of jettison. However, shippers should be allowed to increase the insurance of cattle by paying extra premium. Ship companies should not limit the insured value of cattle, but allow the owner of valuable cattle to put extra insurance on, if he is desirous of doing so. Distillery-fed cattle should not be loaded between the hours of 8 a.m. and 7 p.m. No cattle should be on board ship in the day time for more than three hours before the ship leaves the dock.

Union stock yards would facilitate the business, but union stock yards could not give better accommodation, nor would they be any more healthy or beneficial to the cattle themselves, than the yards we have at present. It is not injurious to cattle to walk three or four miles, except in the case of distillery-fed or other cattle that have been tied up and fed on soft feed, but is injurious for cattle to stand around the docks or in the sun in hot weather. No cattle should be loaded on board a vessel after coming a journey by rail, without feed and water, until they have obtained twelve hours rest.

If horses can be imported at all seasons of the year, why should not cattle be exported? Horses are not usually insured against mortality, and are better cared for by the owners than cattle. If it is the intention of the British Government to prohibit the importation of live cattle, why do they not prohibit the exportation from England of live horses? In the near future the exportation of horses from Canada for Great Britain, if not prohibited, will become an important trade to the country. The regulations for the exportation of live stock cannot be made too stringent. Better accommodation would be no hardship to the carrying companies, as they are entitled to charge for extra accommodation.

I never knew of a case where ship companies let more cattle space on a vessel than they had, but it is of common occurrence for a broker or middleman to take space and then sub-let more than he has. This causes the rush of cattle to the wharf and the consequent injury to the cattle.

This concluded the evidence of the witness.

JOSEPH GOULD, Cattle Exporter of the City of Montreal, gave the following evidence:—

In reply to Mr. Rielle, Advocate, representing the Dominion Live Stock Association, in the absence of Mr. Greenshields:—

I have been for several years engaged in the export cattle trade between here and the United States, and I have considerable experience in the business. For fat cattle the space should not be less than 2 feet 8 inches in Canada. They have 2 feet 6 inches space from the American ports, and I believe that 2 feet 8 inches is much better. Recently they have employed veterinary inspectors at all the American ports, and they have tagged all the animals exported, so as to place them where the disease comes from if there should be any pleuro-pneumonia found amongst the animals. These precautions are taken in connection with the effort they are making to get their cattle into Great Britain alive.

To Mr. SMITH.—I have not the slightest doubt but that anyone who knows anything about the cattle business would prefer to have the space for each animal 2 feet 8 inches. I think it would be a splendid thing if all vessels carrying cattle were obliged to have steam fans. In my opinion, if the Americans got the privilege of sending their cattle into England alive it would almost stop our Canadian trade, because they can raise their cattle more cheaply than we can. In my opinion, it would be a good idea to have electric lights on board cattle ships, if it could be done without too much expense. I have seen the "Ottoman," of the Warren Line, and she is splendidly fitted on the spar deck with permanent fittings, and has every improvement that could be suggested for the safe carrying of the cattle. I would say that a great deal depends on the experience of the captain in the cattle-carrying trade, and I think that the fact that the regular liners carry their cattle so much better than the others is due to the experience of the captains. It is very objectionable to have too much fodder stored on top of the stalls. I would recommend that the fittings on the upper deck should be of angle-iron and 2-inch planks, because the stronger the fittings are the better the cattle would be off.

To Mr. RIELLE.—I believe that the system they have in the United States of shipping cattle from the railway cars direct to the steamers is the very best system that could be carried out; but I believe, until we arrive at that state of

perfection here, a rule should be made that no cattle should be put on board ship until all the dead cargo is loaded. There is a great difficulty about securing that cattle should be loaded from lighters in the port of Montreal; but, at all events, I much prefer that they should be loaded from the cars, as they suffer considerable injury on board these lighters. In connection with the remark I made that a great deal depends upon the experience of the captain of a vessel, I may state that the SS. "Palestine," of the Warren Line, is a comparatively poor ship, but her captain has experience in the cattle trade, and he carries the animals well. If you took off the captain off the SS. "Palestine" I doubt if she would be insured. The insurance companies know the value of an experienced captain.

Q. Do you think that animals depreciate in weight on the winter voyage?—A. They do when they have a rough voyage; but, as a rule, the cattle land just as good on the other side as when they are shipped here—in fact, when they have a good passage and are well treated on board ship they look better on the other side.

This concluded the evidence of the witness.

ROBERT J. HOPPER, of the City of Montreal, Cattle Exporter, gave the following evidence:—

I have been fourteen years in the cattle business, and I have considerable experience in the shipping of cattle. I have been in the trade from its infancy and I have yet failed to meet a man who has made a fortune in the business. I remember on one occasion shipping on the steamer "Quebec," from Portland, and the vessel arrived safely on the other side, but the cattle were gone.

Q. Do you know what killed the cattle?—A. They were killed on account of the steamer passing through the storm.

Q. Were they on the upper deck?—A. They were on the main deck, and a sea came right through and drowned the cattle. I may say that the cattle-carrying trade across the Atlantic has been greatly improved since then.

Q. Have you shipped many cattle this last year?—A. I have shipped principally dairy cows the last few years. There is a demand for our dairy cattle in England, and I think if the trade in dairy cows is handled with precaution and care it will become a very large business.

Q. How many dairy cows have you shipped to England?—A. Somewhere about 100. We did not lose one on the voyage, but the returns were not very satisfactory in some cases. Our cattle were shipped on the Allan boats, and are very well carried across. I think that there might be a little better accommodation on board the cattle-carrying ships; and I may state, in connection with some evidence that has been given here, that I believe a cow will calve as well on board ship as in the stable if she has space enough allowed her on board, and if the man in charge exercises sufficient care.

Q. What space is enough to allow a cow?—A. I have always advocated a space of 2 feet 8 inches by 8 feet, but I would not object to five small cattle going in a space of 10 feet. For distillery cattle, the allowance should be 2 feet 8 inches, and I would make the same rule for cows in calf. I think it would be a great injury to the country if the export cattle trade was stopped, but I do not know that it would be a great injury to some of the men engaged in the export business, because I think they have not made a great deal of money out of it. It would be a very disastrous matter for the country generally for the export cattle trade to be stopped. It is all very well for the Americans to advocate the dead meat business because they have a surplus of it over there; but we cannot compete with them in the dead meat business, because we cannot feed our cattle as cheaply as they can, and we have not the same facilities in Canada as they have in the United States for raising cattle.

This concluded the evidence of the witness.

PATRICK WILKINSON, of the City of Montreal, Cattle Foreman, gave the following evidence :—

I have been a foreman in charge of cattle crossing to the old country for nine years, and my experience is that the cattle are always well treated by the foreman and by the men in charge of the animals. I generally pick out the cattle men myself.

Q. Do you prefer to go in charge of cattle on a tramp steamer or on a regular liner?—A. I would as soon take a “tramp” as some of the regular liners; but as regards Mr. Reford’s boats, I do not want to go in them at all. I travelled in one of them from Boston, and we were treated very differently to what we are treated when we sail from the Canadian ports. Here nobody will recognize these cattle men at all, and nobody wants to associate with them. I crossed on board the “Circe,” out of Baltimore, last winter, and they put me in a room next to the water closet, in which the boards were broken down, and we could not stand it. We had to shift our quarters and sleep between decks. I told the captain, and he treated us better the next trip. The SS. “Warwick” is also a bad boat for cattle men, and they are not treated well on board that ship.

Q. Do you think the cattle men should sign the articles of the ship?—A. I believe the under men should sign the articles, but the foremen ought to have as much to say to their own men as the captain has to the sailors. I think if the foremen have to sign articles it would interfere with the management of the cattle, as the captain would have all to say, and the foreman would have nothing to say on board ship.

Q. Have the liners any better accommodation for the cattle men than transient vessels have?—A. Some of the transient boats are just as good as the liners, and some of them better. We were very badly treated on board the Allan Line steamer “Rosarian,” and when we complained to the captain he told us that we should have arranged that in the office before we left. We tried to eat our meals on the top of the cattle pens going through the Straits of Belleisle, but they fired us, and told us that was no place for cattle men. They told us to go and eat down in our bunks, but there was no ladder going down, and it was very hard to carry down the food.

Q. The cattle were always well treated on board ship?—A. Yes, sir.

Q. Were they as well treated as the cattle men?—A. They were better fed than the cattle men. The cattle are all right on board, because we give them their food, but the steward on board the steamer does not give the cattle men an extra supply, sometimes. I was on board the steamship “Mondego” last year, and she ran ashore at Verchères, outside of Montreal. We were stuck there all day Sunday, and they had no convenience for giving us water for the cattle in any shape. They sailed from the port without the connections being on to supply us with water. A representative of the ship was down there and I told him we had no water, but he told me to go about my business, that he had no time to attend about that as he had to look after the other cargo. We landed 500 sheep and 150 cattle ashore in barges, but some of the sheep jumped into the water and were drowned. One bullock died on the voyage and 135 sheep, and I believe that they died on account of the bad water supplied. I have a sample of the water at home, and it is just as salty as if it were taken out of the ocean. When we got it supplied it was quite hot. They were fat cattle when they came on board ship at Montreal, but they fell away in their condition and we landed them as “stockers.” The cattle landed in such bad condition on the other side that there was an agent sent down by the bank to look at them, and he would not take them. I attribute this to want of ventilation and want of good water. When the vessel stranded in the river every one of the cattle men on board left the ship, because they could not get comfortable bedding or good food, and we had to get more men in their place when the vessel was floated again. The foremen had to sleep in the aft wheel house, near an ice box, the partition between which was rotten and the water from the ice box used to run into the room. A young man named John MacDonald took fever and died two days after returning to Montreal. I attribute his death to these circumstances.

This concluded the evidence of the witness.

Mr. CAMPBELL, on behalf of the Beaver Line Steamship Company, files the following letters :—

“ 43 ST. MARK STREET,

“ MONTREAL, 3rd January, 1891.

“ H. E. MURRAY, Esq.,

“ General Manager of Canada Steamship Company.

“ DEAR SIR,—I am in receipt of yours of yesterday, and in reply beg to say that I crossed the Atlantic in your steamship “ Lake Superior,” which left this city on 24th June, 1890. There was a large number of cattle on board, and I believe they were well cared for. I often watched the men in charge feeding and watering them, and the men in charge I believe did their duty. As the weather was all that could be desired, the cattle did not appear to suffer in any respect on the passage, and were landed in good condition ; and I understood that, with perhaps one exception, all were landed alive and well.

“ I am, dear Sir, yours faithfully,

“ (Sgd.) J. COOPER ANTLIFF, M.A., D.D.,

“ *Minister of Douglas Methodist Church.*”

“ 143 STANLEY STREET,

“ MONTREAL, 6th January, 1891.

“ H. E. MURRAY, Esq.,

“ General Manager Canadian Shipping Company.

“ DEAR SIR,—I am pleased to be able to say, with regard to the treatment of cattle on board your steamers, by which I have sailed, that I was most favourably impressed. I am a farmers' son, and from the time of my earliest usefulness at home I had to assist in taking care of stock, and I have, ever since leaving the farm, been interested in stock, and in the treatment of stock. Now, I must say that the cattle were as well treated on ship board throughout the passages as they are, generally at least, on shore. In conversation with others who have sailed in your ships, I find the same favourable impression with regard to the treatment of the cattle.

“ Hoping this may be of some service to you.

“ I remain, yours truly,

“ REV. M. STEWART OXLEY.”

Mr. RIELLE, on behalf of the Dominion Live Stock Association, fyled the following newspaper extract with reference to Mr. Plimsoll's remarks at a meeting in Toronto :—

“ WILD-TALKING PEOPLE IN MONTREAL DID NOT KNOW WHAT THEY WERE TALKING ABOUT--SO SAYETH MR. PLIMSOLL--BUT HE IS A FRIEND OF CANADA.

“ TORONTO, January 9.—This morning Mr. Plimsoll was taken in hand by Mayor Clarke and some of the aldermen. He was driven round the city, shown the horses of the McKendrie Express Company and several other sights, including the hospital and the new provincial and city buildings. He was loud in his praises of Toronto. At three o'clock he attended the meeting of the Dominion Live Stock Association, which was held in the City Council Chamber and presided over by Mr. Samuel Price, of Montreal. Mr. Price, in his address to the association, said : ‘ It is needless for me to say that all Mr. Plimsoll's statements as to the carrying of cattle during the voyage have been disproved, but on the whole I think we owe him a debt for his stated truths regarding the Canadian cattle trade. During the past year the volume of business has increased over 42 per cent. Within the past two years the Canadian export cattle trade has doubled itself. The Government enquiry which has been going on in consequence of the Bill which Mr. Plimsoll introduced in the British

House of Commons to prohibit trans-Atlantic live cattle on the grounds of alleged cruelty, will, I believe, result in great good. I believe we will now get many improvements which were denied us by the ship-owners, such as the better treatment of the men in charge of cattle; also, that no animals are allowed to be put on board until all the dead cargo is completed and the stalls are built; that all food and fodder for the cattle be carried under cover; that 2 feet 8 inches by 8 feet be the regulation space; that permanent fittings with iron frames and 2-inch boards be put on the spar decks, and that an improved system of ventilation be adopted.'

"Ex-Ald. FRANKLAND, who was elected president of the association, made a speech in praise of Mr. Plimsoll, and so did Mayor Clarke.

"MR. PLIMSOLL thanked the citizens of Toronto and the members of the association for the manner in which he had been treated. He said that wild-talking people in Montreal, who didn't know what they were talking about, had accused him of making charges against Canada. He denied this, and said the charges which these men had taken umbrage at did not deal, as a matter of fact, with any Canadian port. (Applause.) The intemperance of one or two of the Montreal men had prevented him putting the matter in its true light before them. They said he had come to Canada with the deliberate intention of destroying a very important branch of Canadian trade. His intention simply was to fully inform himself in regard to statements which he had heard. Legislation would take place on the subject within the year, and it was necessary that the fullest investigation should be made, in order that no unjust recommendation injurious to any legitimate interest could stand. He explained that the Bill introduced by him provided, in the second clause, for the exemption of live stock from the ban of the first clause in the discretion of Her Majesty's Ministers. England would never do anything to hurt the legitimate interests of her colonies, and any regulations that might be made on this subject would be submitted to the Dominion Government and two representatives of the interests concerned.

"The balance of views could not possibly hurt the legitimate interests of Canada. He defended his own action, and referred to a letter which he had received from a gentleman named Thompson, who stated that it is not uncommon, after a ship gets her full cargo, to rush on fifty or sixty additional head of cattle. He declared himself, in conclusion, a friend of Canada.

"The association passed a resolution recommending the appointment of an inspector to enforce any regulations that might be made by the Government regarding the exportation of live stock. The inspector should be thoroughly competent, and independent of local or any other influence.

"Mr. Plimsoll was entertained to-night at the Queen's Hotel by the Mayor and Corporation of the city. The speeches were of the congratulatory style all round. Mr. Plimsoll was warmly applauded throughout. His address was a repetition of what he said in the afternoon to the live-stock men. He advocated better treatment for men and cattle on the ships."—*Montreal Gazette*, 10th January, 1891.

Captain JAMES J. RIELLY, on behalf of the Allan Steamship Company, fyled the following statistics:—

ALLAN LINE.

LIVE STOCK Statistics, Season 1890.

Month.	Animals Shipped.			Animals Lost.			Remarks.
	Farm Cattle.	Distil'ry Cattle.	Sheep.	Farm Cattle.	Distil'ry Cattle.	Sheep.	
May.....	3,529	172	108	9	.....	1	
June.....	1,999	937	.....	1	6	.....
July.....	3,888	414	3,271	6	.....	45	
August.....	5,872	.....	5,754	13	.....	80	
September..	4,306	.....	1,827	7	.....	16	
October.....	4,426	.....	1,277	14	.....	17	
November.....	2,953	.....	989	9	.....	11	
Totals.....	26,953	1,523	13,226	59	6	170	

Ratio of Loss—
On Farm cattle..... 219
Distillery cattle..... 64
Sheep..... 1 285
These losses include animals landed dead.

MAY, 1890.

Vessel.	Animals Shipped.			Animals Lost.			Remarks.
	Farm Cattle.	Distil'ry Cattle.	Sheep.	Farm Cattle.	Distil'ry Cattle.	Sheep.	
Hibernian...	617	.....	.....	1	.....	.....
Grecian.....	466	.....	.....	2	.....	.....
Canadian.....	633	.....	.....	4	.....	.....
Sarmatian.....	781	.....	.....	2	.....	.....
Brazilian.....	358	172	.....	.....	.....	.....
Siberian.....	423	.....	.....	.....	.....	.....
Nova Scotian..	251	.....	108	.....	.....	1	
Totals	3,529	172	108	9	.....	1	

Ratio of Loss—
On Farm cattle..... 255
Distillery cattle..... Nil.
Sheep..... 926

CATTLE Statistics, Allan Line—Continued.
JUNE, 1890.

Vessel.	Animals Shipped.			Animals Lost.			Remarks.
	Farm Cattle.	Distil'ry Cattle.	Sheep.	Farm Cattle.	Distil'ry Cattle.	Sheep.	
Pomeranian.....	261	299	.....	.....	3	.....
Hibernian.....	395	52	.....	.....	.....	.....
Assyrian.....	300	141	.....	1	.....	.....
Grecian.....	264	198	.....	.....	.....	.....
Canadian.....	350	119	.....	.....	.....	.....
Sarmatian.....	429	128	.....	.....	3	.....
Totals.....	1,999	937	.....	1	6	.....

Ratio of Loss—	
On Farm cattle.....	·05
Distillery cattle.....	·64
Sheep.....	<i>Nil.</i>

JULY, 1890.

Corean.....	354	48	1,186	4	.....	17
Rosarian.....	431	140	.....	.....	.....	.....
Brazilian.....	275	143	230	.....	.....	2
Siberian.....	689	83	.....	2	.....	.....
Buenos Ayrean.....	620	.....	.....	.....	.....	.....
Assyrian.....	273	.....	1,855	.....	.....	26
Pomeranian.....	577	.....	.....	.....	.....	.....
Norwegian.....	649	.....	.....	.....	.....	.....
Totals...	3,868	414	3,271	6	.....	45

Ratio of Loss—	
On Farm cattle.....	·181
Distillery cattle.....	<i>Nil.</i>
Sheep.....	1·375

AUGUST, 1890.

Grecian.....	315	.....	1,661	.....	.....	25
Sarmatian.....	910	.....	.....	3	.....	.....
Corean.....	622	.....	1,208	8	.....	31
Siberian.....	849	.....	.....	1	.....	.....
Brazilian.....	452	.....	1,140	.....	.....	5
Buenos Ayrean.....	911	.....	.....	.....	.....	.....
Rosarian.....	555	.....	.....	.....	.....	.....
Pomeranian.....	898	.....	254	.....	.....	.....
Assyrian.....	360	.....	1,491	1	.....	17
Totals.....	5,872	.....	5,754	13	.....	80

Ratio of Loss—	
On Farm cattle.....	·221
Distillery cattle.....	<i>Nil.</i>
Sheep.....	1·39

CATTLE Statistics, Allan Line—*Concluded.*

SEPTEMBER, 1890.

Vessel.	Animals Shipped.			Animals Lost.			Remarks.
	Farm Cattle.	Distil'ry Cattle.	Sheep.	Farm Cattle.	Distil'ry Cattle.	Sheep.	
Norwegian	645		127				
Corean	517		348	3		2	
Sarmatian	909			3			
Siberian	729						
Grecian	527		751	1		12	
Buenos Ayrean	715						
Brazilian	201		601			2	
Totals	4,306		1,827	7		16	

Ratio of Loss—

On Farm cattle	162
Distillery cattle	<i>Nil.</i>
Sheep	875

OCTOBER, 1890.

Pomeranian	726			1			
Norwegian	692						
Sarmatian	796			1			
Corean	477		635	3		10	
Siberian	853						
Assyrian	158		642			7	
Buenos Ayrean	686			9			
Totals	4,426		1,277	14		17	

Ratio of Loss—

On Farm cattle	316
Distillery cattle	<i>Nil.</i>
Sheep	1,097

NOVEMBER, 1890.

Pomeranian	629			1			
Grecian	155		328			2	
Norwegian	690						
Corean	313		495	4		9	
Sarmatian	877			3			
Brazilian	289		166	1			
Totals	2,953		969	9		11	

Ratio of Loss—

On Farm cattle	305
Distillery cattle	<i>Nil.</i>
Sheep	1,122

CATTLE EXPORT LLOYDS' OF CANADA.

(Sgd.)

JAMES J. RIELLY, *Attorney.*

MONTREAL, 8th January, 1891.

THOMSON LINE.

LIVE STOCK Statistics of Thomson Line Steamers from Canada to United Kingdom Ports, Season 1890.

Steamers.	Number of Cattle shipped.	Number lost or died on passage.
	Head.	Head.
Avlona.....	1,785	4
Barcelona.....	934	5
Dracona.....	1,368	1
Escalona.....	1,411	35
Fremona.....	2,659	3
Gerona.....	3,848	3
Total.....	12,005	51

Equivalent to a mortality rate (from all causes whatsoever) of $\cdot 42$, or less than $\frac{1}{2}$ per cent. of total number embarked.

	Cattle shipped. Head.	Loss (all causes). Head.	Per cent.
Season 1889.....	8,812	21	= $\cdot 23$
Nine years, 1882 to 1890, inclusive...	61,263	413	= $\cdot 67$

The following leading article from the *Montreal Gazette* was filed by the representatives of the steamship companies:—

“THE CATTLE TRADE.

“The opportunity afforded by the presence in Canada of Mr. Samuel Plimsoll to give that gentleman a thorough knowledge of the manner and conditions in which the export cattle trade is carried on has wisely been availed of. Just now, when efforts are being put forth in Great Britain to terminate the privileges Canadian shippers enjoy of sending live animals into the interior, it is important that all misconceptions, both as to the health of Canadian cattle and the manner of their transport across the ocean, should be removed. The case of the “Linda,” upon which great stress has been laid by opponents of the trade on the other side, is wholly exceptional. In the course of an interview Mr. Plimsoll is reported to have ‘described the mode of carrying cattle on the majority of steamers, pointing out that they were laden three and four tiers deep; and after speaking of the disaster which happened to the ‘Linda,’ he said that he was of opinion that half the time the interested parties thought more about their insurance than either the safety or comfort of the cattle. Canada had great privileges compared with the States, and should take care that the trade was not imperilled through the cupidity of certain men, who crowded so many cattle on the ships that nothing short of death or destruction could possibly ensue.’ We have faith enough in Mr. Plimsoll’s intelligence and sense of justice to believe that before he returns to England he will be convinced that strictures of a sweeping character upon the export cattle trade are quite unwarrantable. It is, of course, very desirable, nay! the very essence of continued enjoyment of exemption from schedule, that proper care in the handling of the animals should be observed, and we have conclusive evidence that with such care the loss of life is practically *nil*. Here, for example, is a statement of the number

of cattle shipped from Montreal by the Allan Steamship Company during the past five years, together with the number lost on the voyage:—

Year.	Cattle Carried.	Cattle Lost.	Percentage.
1886.....	19,747	34	0·16
1887.....	17,351	48	0·27
1888.....	19,532	24	0·12
1889.....	25,227	270	1·08
1890.....	28,477	65	0·22

“Except in the year 1889, the percentage of loss has not exceeded one-quarter of 1 per cent., and in the season referred to the abnormal loss occurred in the beginning of July, when the weather was exceedingly hot, and large numbers of distillery cattle died between Montreal and Quebec. Since then, however, patent fans have been put on board the steamers to keep the ventilation pure, and the results have been most gratifying. The single fact that out of shipments of 85,107 cattle by the Allan Line, the aggregate loss has been only 170 head is assuredly sufficient evidence that with proper care, the trade can be carried on without greater mortality on sea than on land.

“The question of whether the trade can be more profitably conducted by shipping dead meat instead of live animals is a purely business one, to be settled by those engaged in it. Certainly, the growing commerce in what is known as “stockers” would be completely destroyed by the substitution Mr. Plimsoll suggests. The live cattle trade can be managed with perfect safety to all interests, with the exercise of prudence, and care, and to any reasonable precautions against over-crowding of vessels, bad ventilation, &c.”

DOMINION LINE.

The following statistics were supplied by Mr. David Torrance, for the Dominion Line, for 1890:—

	Head.
Cattle carried.....	16,430
“ lost.....	170
Sheep carried.....	9,741
“ lost.....	339

Mr. CAMPBELL, representing the Beaver Line Steamship Company, filed the following:—

BEAVER LINE.

Extraordinary good record of mortality on live stock carried from Montreal since the year 1881 to close of past season, showing the loss for each year, and the remarkably small percentage, 0·35 per cent. on Cattle, and 1·81 per cent on sheep, for the last ten years:—

Year.	Number Carried.		Cattle Died.	Sheep Died.	Average Loss.	
	Cattle.	Sheep.			Cattle.	Sheep.
1881.....	8,374	13,576	84	262	1·99 per cent.	1·92 per cent.
1882.....	7,525	20,001	15	281	0·19 “	1·40 “
1883.....	7,739	23,853	26	788	0·33 “	3·28 “
1884.....	8,467	15,421	19	388	0·22 “	2·51 “
1885.....	9,374	11,791	25	112	0·26 “	1·00 “
1886.....	9,197	24,393	19	431	0·20 “	1·75 “
1887.....	10,864	11,581	47	190	0·43 “	1·64 “
1888.....	10,976	18,159	14	190	0·13 “	1·05 “
1889.....	12,021	12,862	44	171	0·37 “	1·33 “
1890.....	13,629	7,454	57	48	0·41 “	0·63 “
	98,166	159,091	349	2,861		

	Head.
Cattle carried.....	98,166
“ died during voyage.....	349
Sheep carried.....	159,091
“ died during voyage.....	2,861

Montreal, 26th December, 1890.

Mr. JAMES ALLAN, on behalf of the steamship companies, proposed a vote of thanks to Mr. Smith, Deputy Minister of Marine, for the manner in which he had conducted the Inquiry.

Mr. WATT, on behalf of the merchants of Montreal generally, expressed his thanks to the Government for holding the Inquiry, and to Mr. Smith, Deputy Minister of Marine, for the manner in which he conducted the proceedings.

Mr. RIELLE, on behalf of the Dominion Live Stock Association and cattle exporters, also expressed his thanks to Mr. Smith, Deputy Minister of Marine.

Mr. SMITH, Deputy Minister of Marine, in acknowledging the vote of thanks proposed by these gentlemen, expressed his belief that this Enquiry would result in much benefit to the trade. He said it was the desire of the Canadian Government that everything possible should be done to improve the cattle-carrying trade between Canada and Great Britain.

The Enquiry at Montreal then closed.

ENQUIRY INTO THE CATTLE EXPORT TRADE

BETWEEN

THE DOMINION OF CANADA AND GREAT BRITAIN.

QUEBEC, 12th January, 1891.

Mr. William Smith, Deputy Minister of Marine, under instructions from the Minister of Marine, opened an inquiry at Quebec, on the 12th day of January, 1891, to take evidence relative to the export trade of cattle between Canada and Great Britain.

The Enquiry was held in the Board Room of the Harbour Commissioners of Quebec. It was attended by representatives of those interested in the trade and commerce and agriculture of Quebec.

Mr. Richard Turner, Chairman of the Board of Trade, conducted the examination of witnesses on behalf of that body.

Appended is the evidence of the several witnesses, taken during the course of the Enquiry at Quebec.

Mr. Smith explained at some length the object of the enquiry, and the nature of the evidence which had been taken at Montreal relative to the cattle trade, and also the nature of the Bill relating to deck-loads in winter, which has been introduced into the Imperial Parliament at the instance of Mr. Plimsoll, having for its object the repeal of the law at present in force, which allows a limited deck-load of deals to be carried in the winter months.

RICHARD TURNER, Merchant, of Quebec, and President of the Quebec Board of Trade, makes the following deposition:—

He states: Before giving my evidence on this matter I wish to apologize to the gentlemen present for being the first to speak, but I have followed this enquiry closely in Montreal, and I therefore think that I might perhaps be allowed to make the first statement. The chief object in asking the Government to continue this *enquête* at Quebec was that we might show them, and show to the country generally, the facilities which Quebec possesses for the shipment of cattle (or, indeed, the shipment of any other commodities) over any port in the Dominion of Canada. I make no exception when I say that we have facilities here over any port in Canada. The property and the docks which enable us to offer those facilities belong to the Government of Canada, and have cost the country a very large sum of money. We in Quebec consider that these facilities which we possess should be utilized to their fullest extent. I might also point out that we are 180 miles nearer to the sea than the port of Montreal, and consequently cattle shipped at this port, which may be enfeebled or exhausted by the railroad journey from Ontario, have an opportunity of recuperating here, on account of the fresh, cool air, and other facilities for their care, so that they may the better stand a sea voyage to England. Now, as regards the extra cost for the railway transit of cattle to place them at the port of Quebec. I may say that I consider that cattle shipped from the far west would pay very little on the long haulage principle if the charge were made proportionate to the distance. Cattle shipped from Ontario, if sent to Quebec instead of to Montreal, would take very little extra time in the transit, and the journey between Montreal and Quebec is not any source of loss to the cattle, for they can be immediately transferred from the railway cars to the vessel on their arrival at Quebec. The train journey, with the

fresh air always blowing through the cars, could not injure them. I may mention that in the case of one of the steamships loaded here last year with cattle her entire live cargo was put on board in between three and four hours. We have ample accommodation here to pasture thousands of cattle, and that accommodation is within very close proximity to the point of shipment. During the hot season in the warm summer months I would strongly urge the shipment of the distillery or fat cattle from the port of Quebec, and my reason is, that those heavy animals are in possession of fresh, cool air immediately from the time they board the steamer. I have no doubt that the cause of the mortality amongst cattle is largely due to the exhausted state of the animals when they are placed on board steamer in Montreal, where they have no accommodation adequate for shipping them. I believe that this causes serious loss on the voyage from Montreal to Quebec. This journey occupies sometimes from twenty-four to thirty-six hours before the steamer sails from Quebec. The animals are consequently enfeebled, and a heavy mortality ensues. This mortality is not due in many cases to the cause of bad weather on the ocean, but to the want of facilities in Montreal for proper shipment, and the heat of the voyage between Montreal and Quebec. It is not an unfrequent sight for us in Quebec to see cattle floating in the river in the vicinity of our city. I have visited the steamers while loading, both in Montreal and Quebec, and I can speak of the great advantages which we possess in Quebec for carrying on this important trade. I have seen in Montreal, cattle lying down on the streets or the wharves frequently, with their tongues extended, which may be caused either by the excessive heat or the want of water. In the few cases of shipments of cattle from Quebec last year I have not seen any instance of this kind. The cattle were fresh going on board the steamer, and they showed not the slightest sign of exhaustion. I may state, with reference to the size of the stalls which should be allowed the animals on board the steamer, that I have seen cattle lying down in spaces 2 feet 6 inches wide, which, for the majority of cattle, would, in my opinion, be sufficient. Still, if 2 feet 8 inches were allowed, it would, I think, be better in the case of the shipment of large cattle. I found that the stalls were of a very weak character and built of weak material, and I quite endorse the general opinion expressed in Montreal, that they should be constructed of 2-inch plank, and that they should be made of a more solid character. The stalls on the spar deck should be covered with such material as to prevent the wash of the sea or the spray wetting the cattle. For the information of the gentlemen present, I trust I may now be permitted, Mr. Commissioner, to read the recommendations presented by the Board of Marine Underwriters in Montreal. As some of the clauses contained in this recommendation do not affect Quebec, it may be unnecessary to read them: but I think, however, that we should be placed in possession of the facts which regard both Quebec and Montreal.

COPY OF UNDERWRITER'S RECOMMENDATIONS.

"It is recommended that the Government appoint a thoroughly competent, independent seafaring man, who has had several years experience of live stock at sea, and has made a successful record while in charge of vessels carrying live stock from this continent to Great Britain, and who is thoroughly acquainted with the requirements of the trade, whose duty it should be to inspect every steamer on which it is proposed to carry live stock, and determine whether she is a proper vessel for such business; and no vessel shall be allowed to carry cattle that has not been passed by him, and for which a certificate has been issued by him, stating how many cattle or sheep he considers may be carried on each deck.

"He is not to pass any vessel for live stock unless she is equipped and built as follows:—

"1. Should be at least 7 feet 3 inches high between decks.

"2. Should be provided with steam fan, or fans of sufficient capacity to force fresh air between decks in quantity ample for all the animals that can be placed on said deck or decks.

"3. Should have a sufficient number of 'up-take' ventilators.

"4. Should have a condensor of sufficient size to provide water for all animals that are allowed to be carried, whether steamers are provided with water ballast tanks or not.

"5. Should have angle iron frames, fitted from side to side on top deck, 3 feet apart, on all steamers carrying a deck load of cattle, to be boarded in with 2-inch planks.

"6. Steamers should be at least 1,200 tons net register.

"7. Steamers should have at least 250 horse-power.

"8. Should have a sufficient number of water barrels, and hose, conveniently placed.

"9. Space to be allowed for each animal should not be less than 2 feet 8 inches by 8 feet, it being understood that five stockers may be loaded in the space of four fat cattle, and not more than ten sheep, equal to one fat ox, it being understood that stockers are animals weighing not over 1,000 lbs.

"10. No hay or other feed to be carried on deck, but in every case should be stowed under deck in a convenient place.

"11. No head ropes under $\frac{3}{4}$ -inch in diameter to be allowed.

"12. That no distillery cattle for shipment be allowed on the wharf between 8 a.m. and 6 p.m., and all loading of said cattle to be done between 6 p.m. and 8 a.m.

"13. Live stock are not to be loaded on any steamer until the loading of the cargo has been completed.

"14. A sufficient number of competent attendants should always be provided, and that these men be obliged to sign the ship's articles, and be under the authority of the captain.

"15. All steamers carrying cattle should have on board at least three barrels of oil for use in heavy weather.

"16. We suggest that all steamers carrying live stock be lighted with electric light.

"17. In fitting up stalis, passages should be left, so that the scuppers can be reached and kept clean.

"18. Cattle to have at least twelve hours rest after leaving cars before they are put on board.

"19. There should be a Union stock yards having a wharf of its own, from which all live stock should be shipped.

"20. That no steamer can get her Customs clearance until this Government Inspector gives his certificate that the cattle are loaded and the steamer equipped in accordance with his requirements."

Now, with regard to the last part of the preamble of these recommendations, it would be a hardship on us in Quebec, if it were carried out now, because, as you are aware, while in Montreal this trade has developed itself into enormous proportions, it is only in its infancy with us in Quebec. I trust, however, that the trade shall grow here to large proportions also. With us in Quebec there might perhaps not be one qualified to discharge the duties of this office, as our trade has not developed yet, and the Government would probably appoint an official, say from Montreal, to take this position. I contend that it might be a difficult matter for us in Quebec to find a person thoroughly acquainted with the shipment of cattle, and I believe that the inspection should be left to the jurisdiction of the port warden, as far as it applied to Quebec. I do not think it is the desire of any merchant in Quebec that we should accept of an officer for this position from Montreal. We are quite independent of Montreal in connection with this matter, and we are aware that residents in a certain city identified with the trade of that city might not act as independently as a person belonging to the city in which he discharges the duties.

With regard to clause 12 in the Underwriter's report, I would object also to the recommendations of that clause as regards Quebec, because our facilities are such here that the shipment of cattle would not interfere with the business in other branches. The position of Montreal is so totally different from Quebec that this

clause would not apply here. In Montreal the space along the river front is, comparatively speaking, small and confined, while with us it is ample, and affords every kind of accommodation.

Mr. BECKETT.—Would you not also object to the clause relative to the necessity for steam fans being put on board the cattle steamers? Don't you think they would be unnecessary if the cattle were shipped at Quebec and had not to undergo the hot voyage between Montreal and Quebec?

Mr. TURNER.—I have not looked into that question thoroughly, but I should think that if the cattle were shipped at Quebec the necessity for the fans would be lessened, if not altogether removed.

Mr. BECKETT.—I believe it is the fact that the fans are put on board the steamers in Montreal and taken off at Quebec or Rimouski, and shipped back to Montreal.

Mr. SMITH.—It was stated in evidence that one object of the steam fans was to prevent the smothering of the cattle at sea when the hatches were battened down during heavy weather.

Mr. BECKETT.—Yes; but they take the fans off at Rimouski or Quebec and send them back to Montreal.

Mr. SMITH.—We have had in evidence also that these fans were put on board for the purpose of securing the safety of the cattle between Montreal and Quebec or Rimouski. In some cases they were not carried on the voyage, and when the hatches were battened down in heavy gales a number of the cattle were suffocated. It would occur to me that one of the chief objects of having fans on board is to furnish fresh air to the cattle when the hatches are battened down.

Mr. BECKETT.—It has been shown that fans are more requisite between Montreal and Quebec than they are at sea.

Mr. SMITH.—They are requisite on the passage between Montreal and Quebec in hot weather, but they are also most requisite, particularly when vessels carrying cattle meet with heavy weather at sea and the hatches have to be battened down. Of course, we know instances have occurred on steamers coming from Montreal to Quebec where a great many of the cattle were lost during the very hot weather, presumably for want of ventilation. It also appears that some of the steamers did not consider the fans necessary when they got to Quebec, and therefore they put them on shore either at Quebec or Rimouski.

Mr. BURSTALL, Merchant, of Quebec.—That tells very strongly in favour of Quebec.

Mr. SMITH.—Of course, if the cattle were shipped at Quebec there would be no necessity for the fans between Montreal and Quebec.

Mr. BURSTALL.—You gave us a great deal of information, Mr. Commissioner, in your opening remarks, for which we are all greatly obliged to you. You did not, however, say anything as to the percentage of the losses of cattle between Quebec and Montreal. Could you tell us the percentage of cattle lost between Montreal and Quebec, as distinct from the percentage lost between Quebec and the port of destination on the other side.

Mr. SMITH.—None of the evidence presented to us shows that. The steamship companies just stated the percentage of losses on the voyage from Montreal direct to England.

Mr. BURSTALL.—We all know that there are immense losses of cattle both on the wharf in Montreal and in the river between Montreal and Quebec. The chances are that we had statistics of the losses between Montreal and Quebec it would help us very much, and tend to prove that the cattle should be shipped from Quebec.

Mr. SMITH.—I suppose they did not take the trouble to furnish these statistics; or perhaps they were not in possession of them, and were satisfied to collect the percentage of losses on the whole voyage to England.

Mr. TURNER.—I think I am correct in saying that the Board of Trade attempted to get this information, but we did not succeed. It was evidently not in the interest of the steamship owners to give it.

Mr. TURNER continues his statement regarding the recommendations contained in the statement of the Board of Underwriters. He says: With regard to the recommendation that there should be electric light on board the cattle steamers, we must remember that it is only within the last few years that the fine passenger steamer "Parisian" has been lighted with electricity, and it seems to me that it would be putting unnecessary expense on the steamship owners to exact that the lighting of cattle ships should be by electricity, while on many of the passenger ships they have not electricity as yet. It would be making the cattle very much better off than the passengers.

Mr. SMITH.—The argument in favour of electric light was that in a heavy storm at sea a man going among the cattle with a lamp in his hand had not the same facilities as a man working amongst the cattle when there was electric light. It was said that when the cattle got loose it was dangerous to go amongst them, unless there was electric light, and that in this respect it was even more necessary to have electric light on vessels carrying cattle than on passenger ships. I made a voyage on the "Parisian" and on the "Sardinian" last year, and I found that the electric light was a very great convenience and comfort to the passengers. Of course, if cattle ships were compelled to have electric light it might exclude transient vessels from the trade, because they would not go to the expense of fitting up electricity when they came here for a cargo of cattle.

Mr. TURNER.—That is the point I make objection to. If regulations of this kind were made it would cut off a class of steamers which are in many respects equal to what are called the regular liners. Of course, I know that steamers are now being built specially for this cattle-carrying trade, which no doubt are fitted up with electricity because they find it profitable to make it a special feature of their business. In some cases really first-class steamers may or may not be fitted up with the electric light, and it would be a source of great loss to them if they were shut out of the business. At all events, in my opinion it is unnecessary that every cattle vessel should have electric light.

Mr. SMITH.—Do you think it might prevent certain vessels coming here which are necessary to carry on the trade of the port?

Mr. TURNER.—Yes: I find that the Underwriters also suggest that the cattle should have a rest before being put on board the steamers. That may apply to Montreal, but I do not think it is necessary in Quebec. The cattle which I saw shipped here last season were remarkably fresh going on board the steamer, and I think if they came to Quebec in good condition it would be even a benefit to them to put them on board at once, considering that they are out to sea in the course of three or four hours.

With regard to recommendation No. 20 in the Underwriters' report, I consider that the clause is an excellent one, and I believe it will do great good if it were put in force here. There is I believe no rule in Quebec obliging a person to produce a certificate before getting a clearance from the Customs. In Montreal it is a rule for all vessels leaving the port to get a certificate, and that certificate is presented to the Customs house before a clearance is given.

I consider that the insurance upon cattle shipped from Quebec should be considerably less than on cattle shipped from Montreal. The cattle shippers who sent cattle from Quebec last season express themselves as well satisfied with the facilities which we had for shipping cattle from Quebec, and they said they had every reason to believe that the shipment of cattle from Quebec would largely increase next year.

Mr. SMITH.—Of course you are aware that the shipping of cattle from Montreal is entirely in the hands of the cattle shippers, and nothing that the Government could do would compel them to ship cattle from here if they did not wish to do so.

Mr. TURNER.—Certainly.

Mr. SMITH.—How would you propose to bring about the shipment of cattle from Quebec, even granted that facilities here are much better than in Montreal? How would you propose this shall be brought about, if the cattle exporters did not wish to ship them from Quebec? Of course, they study their own interests, and

they must have ascertained that it is more economical, or more something else, for them to ship from Montreal, or otherwise they would not do so. What action would you recommend in order to bring about the shipment of cattle from Quebec.

Mr. TURNER.—In the first place, I would show that the marine underwriters and insurance companies are not treating Quebec properly by charging the same rate of insurance from Quebec as from Montreal.

Mr. SMITH.—If there were underwriters here to insure cattle at a cheaper rate I presume the cattle exporters would be very glad to insure here.

Mr. TURNER.—Yes : but you must remember that the underwriters in Montreal are not residents of Montreal city. They are residents from all over the Dominion and many of the shareholders reside even in Great Britain. The stockholders in these companies are resident in all parts of the world, and if the facilities afforded by Quebec, and the position which Quebec occupies, was properly understood by them, there is no doubt that a more equitable rate would be struck favouring Quebec—a point at which the losses upon cattle shipments would be considerably less than the shipments made from Montreal.

Mr. SMITH.—Would not that be a question for the Quebec Board of Trade to take up? Could they not enter into communication with the underwriters in Montreal, and show them the lessened risk in shipping from Quebec, so that they would quote a less insurance from Quebec than from Montreal.

Mr. TURNER.—Certainly it is.

Mr. SMITH.—I do not see at present what the Government can do, or how they could interfere in this matter.

Mr. TURNER.—The Government own the wharves and dock property here, and it is for the Government to see that the facilities are utilized.

Mr. SMITH.—I do not myself see how the Government could do anything to compel the cattle exporters to ship their cattle from Quebec, or to compel the marine underwriters to take a less rate of insurance from Quebec than from Montreal.

Mr. TURNER.—Of course not; but, at the same time, if the facilities which we have here are not fully exposed and ventilated, as well locally as all over Great Britain and Canada, we shall remain here, with a very large and valuable property on our hands, without developing it as it should be developed. I consequently think that it is quite within the jurisdiction of the Government to make representations that they own this valuable property here, that they have facilities here for the shipment of cattle to a large and almost unlimited extent, and that while we do not want to deprive the city of Montreal of the trade which she has succeeded in securing and which has been built up to a large extent by the energy of her citizens—I think Montreal and her people deserve credit for it—yet if the trade has developed itself to such an extent that Montreal is unable to provide for it, I think that the Government, the owners of this splendid property here, should draft into its report such a recommendation as would aid and assist in developing this branch of trade from the port of Quebec. If you consider the cattle trade from a humanitarian point of view, we must consider that Quebec has also great advantages. We are much closer to the seaboard than Montreal, and our facilities for loading cattle are much better than in that city. The distance to the sea is shorter, and Quebec can supply all the fodder the cattle needs. Cattle will depreciate less on the voyage, they will not suffer the heat and inconveniences which they now suffer in Montreal, and will altogether be better cared for. When those works were initiated at the port of Quebec it was probably never thought that the cattle export trade would develop to the enormous extent it has. The trade has grown upon us and we are prepared for it, while our sister city of Montreal is not prepared to handle it, even at its present proportions. There is no doubt, and I have it from reliable sources, that this trade is still growing, and will attain enormous proportions in the future. I have used all these arguments with some of the shippers of cattle, whose business it is to make arrangements for the shipping of cattle and the securing of space on the steamers. I said to them: Would it not be much more to your advantage to take the cattle by train to Quebec, where they would be cool, and would receive very little injury, and

ship them on board the steamer at Quebec, where they would be out to sea in a very short time. They said that it could not be done, as the ship would charge as much from Quebec as from Montreal, that the space on the steamers was engaged and paid for in Montreal, and that it would be an additional cost to bring them by train to Quebec. I have mentioned all these arguments to the cattle shippers.

MR. SMITH.—I presume the cattle owner will not do anything but what he hopes will suit his own interest. Of course, all you have mentioned will appear on the record, but I do not see that the Government can do anything to bring the cattle trade to the port of Quebec. As you say, great facilities exist in the port of Quebec, and these facilities are afforded by Government property. The voyage from Montreal to Quebec would be saved, but the cattle shippers have the selection of the vessels and space, which is all engaged beforehand. It is a very complicated business, and it is surprising what a number of people are concerned in it. Unless the cattle shippers see that it would be to their advantage to ship their cattle from the port of Quebec, I do not see in what respect the Government can do anything to induce them to change their plan of operation.

MR. TURNER.—I trust, at all events, that one result of this enquiry will be to show those interested in the cattle trade that we have these facilities at Quebec and that it would be to their advantage in every way if they shipped their cattle from this port.

This concluded the evidence of the witness.

THOMAS BECKETT, Lumber Merchant, of the City of Quebec, makes the following deposition :—

I am a lumber merchant, and have been for years engaged in the shipping of lumber from Quebec to the old country. I am aware that at present vessels, after the month of October, are allowed to take 3 feet of lumber as deck cargo, and that Mr. Plimsoll, of England, proposes to have this limited deck load abolished. Whilst entertaining the greatest respect for Mr. Plimsoll's object from a humanitarian point of view, yet we, who are engaged in the timber trade, cannot shut our eyes to the fact that Mr. Plimsoll's previous action in regard to timber ships has had the effect of driving away from this port nearly—all the British ships formerly engaged in this trade. I may say that at least nine-tenths of them have been transferred from the British to foreign flags. As regards Mr. Plimsoll's views about deck loads, I may point out that the statistics for the past year, which has probably been the most exceptional year on record, as regards heavy weather on the Atlantic, show that very few vessels which have carried deck loads have been lost at sea.

MR. SMITH.—Those are the statistics for the whole season.

MR. BECKETT.—Yes. I may state that it seems to be the general opinion that a 3-foot deck load adds to the safety of the vessel rather, than otherwise.

MR. SMITH.—The evidence which I took in St. John, N.B., many years ago, would support this contention.

MR. BECKETT.—Yes; I believe that to be a fact, because the sea washes clean over, and there is no lodgment of water on the decks.

MR. SMITH.—Do you know of any lives having been lost on vessels carrying the limited 3-foot deck load in the fall of the year, which loss might be attributed to the carrying of the deck load? Do you know of any accident to the ships or any loss of life which could be attributed to this deck load?

MR. BECKETT.—I know of no loss which could be attributed to the deck load. I have heard it said that occasionally a man was washed overboard from his ship, but this might have happened on any ship, and it was not owing to the carrying of the deck load. Of course the trade would rather that the ship would not carry deck loads, because the owners have to pay additional insurance, as the lumber is sometimes washed overboard.

MR. SMITH.—Is that on the 3-foot deck loads.

Mr. BECKETT.—Yes; we lose some of the deck load occasionally, because some of the lumber gets loose, and it is washed overboard sometimes.

Mr. SMITH.—Do you think it would be to the benefit of the trade and to the benefit of life and property if Mr. Plimsoll's Bill abolishing deck loads after the 1st of October, were allowed to pass?

Mr. BECKETT.—I do not think it would tend to increase the safety of the ship or the lives of those on board at all.

Mr. SMITH.—What would be the additional benefit to the ship for carrying a deck load in the matter of freight?

Mr. BECKETT.—It would range from £150 to £250 sterling, depending, of course, on the size of the ship.

Mr. SMITH.—Would the trade prefer to see the deck loading of ships abolished, or would they prefer to let it remain as it is?

Mr. BECKETT.—I think the trade would prefer, from a commercial point of view, that ships should not carry deck loads at all.

Mr. SMITH.—Would that apply to summer and winter?

Mr. BECKETT.—It would not apply so much to summer, because we do not require to pay extra insurance in summer, and we can load square timber in summer.

Mr. SMITH.—In point of fact, the exporters of lumber in Quebec are not interested in preventing this Bill of Mr. Plimsoll's to pass and become law?

Mr. BECKETT.—Not so far as deck loads of timber are concerned. I merely give my opinion as to the effect it will have on the safety of the ship.

Mr. SMITH.—Are there no local shipowners in Quebec who would be interested in it?

Mr. BECKETT.—I do not think so. There are few local shipowners now, as it is mostly all foreign ships that come here.

Mr. SMITH.—Do steamers take deck loads here in the fall, after the 1st of October?

Mr. BECKETT.—Oh, yes; the steamers take deck loads of deal, the same as they do in summer.

Mr. SMITH.—Up to 3 feet?

Mr. BECKETT.—Yes.

Mr. SMITH.—They don't want to take any more than that?

Mr. BECKETT.—They would take it if the law allowed them.

Mr. SMITH.—You think it much better not to allow them?

Mr. BECKETT.—Yes.

Mr. SMITH.—Then you approve of the law limiting the deck loads to not more than 3 feet?

Mr. BECKETT.—Yes. From an interested point of view, I would abolish deck loads altogether after the 1st October.

Mr. SMITH.—You are in favour of that?

Mr. BECKETT.—Yes.

Mr. SMITH.—Then you are with Mr. Plimsoll on that point?

Mr. BECKETT.—Yes; entirely on that point.

Mr. SMITH.—But as long as the law allows it, the ships which come here looking for freights want to get all the cargo they can take, and you give them the cargo if you have it?

Mr. BECKETT.—Our charter party requires a deck load, and we are obliged to provide it.

Mr. SMITH.—You would be quite satisfied to see it repealed, and have no deck loads at all after the 1st of October?

Mr. BECKETT.—Yes.

Mr. SMITH.—The circumstances here and at St. John, N.B., are different. At the latter port they own their own vessels, and they count a great deal upon being allowed even the 3 feet of deck cargo. Before the law allowed them to take 3 feet of deck load, and when it provided that there should be no deck load, these

vessels cleared for Eastport, in Maine, and entered there, so that they were able to defeat the law. This brought about a change in the law. Of course, it is a great consideration to a shipowner that a ship should carry as much cargo as she can; but the shipper of the cargo is in a different position, for he has to pay additional insurance, and the deck load is often damaged by salt water.

Mr. BURSTALL.—Yes; and the ships in the Maritime Provinces are larger than those coming to this port here; we have mostly 700 tons Norwegians coming here.

Mr. SMITH.—They considered it a great grievance in the Lower Provinces, and they protested loudly to the Canadian Government in reference to Mr. Plimsoll's Bill of 1876. We secured that it should be provided that vessels should be allowed to carry a deck cargo of not more than 3 feet, and we have since heard of no loss of life and of no complaints against limited deck loads. Mr. Plimsoll says that deck loads generally are the cause of a great deal of loss of life, and he thinks it a mistake to allow them. However, the provision for a limited deck load passed in the Act of 1876, and now Mr. Plimsoll is making efforts to have it repealed. Mr. Henry Fry, who was also a humanitarian, gave his opinion that there should be no deck loads at all.

Mr. BECKETT.—Referring now to the cattle trade, in which we are more directly interested here, I may state that, in my opinion, Mr. Plimsoll's views that we should ship dead meat from Canada instead of live stock would be directly opposed to the interests of Quebec, and I am quite sure it would destroy the shipment of meat to certain markets in England. For instance, last winter, in Aberdeen, I spoke to several cattle dealers there, and they said their chief interest was in the importation of light stock cattle, which they could get from Canada in a lean condition, feed them up after their Scotch fashion, and then sell them as Scotch beef. The dead meat trade would injure that trade in "stockers" between Canada and Scotland and the north of England. I spoke to those people in Scotland about dead meat and refrigerators, and they said they did not want refrigerators; they wanted cattle they could fatten themselves. They said to me, if you send us over here young, big-boned cattle—they did not want old or weak cattle, for they could make nothing out of them—if you send us over young cattle we can fatten them and make money out of them; but we don't want your fat cattle, and we won't have your dead meat.

Mr. SMITH.—I have been in communication with Colonel Innes, of Aberdeen, who is greatly interested in this export trade of "stockers." He is a humanitarian, and wishes to see the cattle given every possible care. He is, however, opposed to Mr. Plimsoll bringing in this Bill, because it would injure a great many farmers in Scotland if the importation of this class of cattle, known as "stockers," was prohibited. In fact, a great many of the Scotch farmers make their living by buying the Canadian "stockers" and making them fat for the English market.

Mr. BECKETT.—In Scotland certainly it would destroy a very large proportion of this cattle trade if Mr. Plimsoll's Bill were passed.

Mr. SMITH.—Of course, every additional ship which is loaded here increases the circulation of money. This export cattle trade causes a great many additional ships to come to the St. Lawrence. It brings money into Quebec, which pilots, and tradesmen and others, get the advantage of, and is altogether a great benefit.

Mr. BECKETT.—Certainly it does. From my own experience in keeping cattle, and since this enquiry was instituted, I tried the measurement of the spaces allowed for cattle in my own stable, and as a result I find that for an ordinary animal, not over 1,000 lbs., 2 feet 6 inches is enough space. Of course, cattle men are the best judges of that, and it is a thing that will remedy itself.

Mr. SMITH.—If you leave it to the option of the cattle exporters and shipping agents they are anxious to make, no doubt, the smallest amount of space possible. I believe myself that many of the accidents which have happened to cattle ships sailing from the United States might be attributed to overcrowding of the animals, so as to make the ship top heavy, and thus also preventing the men from properly handling the cattle.

Mr. BECKETT.—I think such Government regulations might be brought about so as to prevent the possibility of crowding on cattle ships. As to the structures on deck for the accommodation of the cattle, I think that they should be strong, and the stronger the fittings are made the better I like it, being in the lumber business. Let them make the boards 5 feet thick if they like.

Mr. TURNER.—Do not you consider it would be in the interest of the trade of Quebec if a law were passed by which every vessel leaving the port should have a certificate from the port warden?

Mr. BECKETT.—Do you mean every vessel laden with timber and other cargo?

Mr. TURNER.—Yes; every vessel.

Mr. BECKETT.—Well, I think if the port warden were to do that he would need a great many assistants. He could not grant a certificate to a vessel unless he personally inspected it, and I do not think there is any necessity for that.

Mr. TURNER.—They have given a certificate to every vessel in the port of Montreal, although I do not think that there is any law governing it.

Mr. BECKETT.—The bulk of the cargoes from Montreal are perishable, whereas timber is not a perishable cargo.

Mr. TURNER.—They load timber in Montreal?

Mr. BECKETT.—But it is only a portion of the cargo. It does not form the entire cargo except in deals sometimes.

Mr. SMITH.—If any vessel is noticed to be overloaded, or improperly loaded, or has a list in her, they could call on the port warden, under the present law, and he would examine the vessel.

Mr. TURNER.—The shipmaster's interests is to sign bills of lading for as large quantities as possible. Whose interest would it be to call in the port warden? It would not be the shipper's interests, for he is insured, and it would not be the ship-owner's interest, because he wants to carry as much as he can.

Mr. BECKETT.—So far as the timber ships are concerned, the seamen generally cry out if there is anything wrong. If they think there is anything wrong they can make a complaint and refuse to go to sea, and then the port warden is called in.

Mr. TURNER.—Yes; but it must be remembered that the men are sometimes put on board in such a state that there are barely sufficient hands to take the ship down the river. Last summer I noticed a steamship in the stream, and she seemed to me to be top heavy, but the question was whose duty was it to protest against a vessel going to sea in that state?

Mr. BECKETT.—It is the port warden's duty. You know it would be impossible for the port warden to go around and inspect every timber ship loaded here in summer time. The port is a very extensive one, and ships are loaded in different places, sometimes miles apart.

Mr. TURNER.—It would increase the port warden's labour, but I think it only right that there should be such inspection.

Mr. SMITH.—The Government officer has to go on board to see that there are not more than 3 feet of deck load on the vessel. If there is more he refuses a certificate, and she cannot get a clearance.

Mr. BECKETT.—All that is necessary in the case of timber ship is to see that she does not leak, that she is not below water line, and that in the fall her deck load is not over 3 feet.

This concluded the evidence of the witness.

WILLIAM SIMONS, Port Warden of the Port of Quebec.

By Mr. Smith, Deputy Minister of Marine:

Q. Have you anything to do with the inspection of vessels leaving this port?—

A. Yes, sir; I inspect vessels loaded with grain.

Q. If they have any grain in them you inspect them?—A. Yes, sir; that is all.

Q. Do they ever take grain on board here?—A. Yes; those vessels that take grain at Montreal and any fresh cargo here are subject to my inspection. Those vessels that take no cargo in Quebec pass right through; vessels which load in Montreal pass right through.

Q. If they take any additional cargo here after loading in Montreal they come to you at Quebec for a certificate?—A. Yes, sir; even if they take coal here, if they have any grain on them when leaving Montreal they have to get a certificate.

Q. You see, in that inspection that they are not below the Plimsoll mark, and that they are seaworthy?—A. Yes, sir; that is my duty. I have to see that the grain cargo is properly loaded here and that the vessel is seaworthy.

Q. Are you aware that they have changed the rule somewhat in Montreal, by requiring every vessel clearing from Montreal, no matter how she may be laden, to get a certificate of inspection?—A. Yes, sir; I believe that all vessels laden in Montreal have to get a certificate from the port warden.

Q. That does not apply here?—A. No, sir; that does not apply here.

Q. You inspect no vessels here in Quebec except those which have grain on board?—That is all.

Q. I see that some vessels came from Montreal and took cattle on here last season. If any of those vessels had grain in their holds you would inspect them when they take cattle on here?—A. Yes, sir; those which had grain on board I inspected them.

Q. Had any of these cattle vessels that took cattle on board here part of their cargo in grain?—Yes, sir; but I think there was only one which took cattle on board here and had grain in her hold.

Q. The other vessels had no grain, and you did not inspect them?—A. I had no business to inquire or interfere.

Q. If they had grain and loaded here with cattle you would have inspected them?—A. Yes, sir.

Q. To what extent would your inspection go as to the cattle? Would you inspect the fittings for the cattle on the upper deck, and see generally that the vessel was seaworthy before she went to sea?—A. If the fittings were put up here I would examine them, but any fittings put up in Montreal would come under inspection there. I would see to the draft of the vessel, and see that she had sufficient seaboard and was seaworthy if she got the cattle on board here. As regards the inspection of the cattle themselves, they are subject to the inspection of the Government Veterinary Surgeon resident here, Doctor Couture. The Veterinary Surgeon also examines the vessel here in regard to the space occupied by cattle.

Q. Do you know what space he allows for each animal?—A. No, sir.

Q. You never looked into that question?—A. I never interfered with that.

Q. Do you think there should be a Government inspection of vessels taking cattle on board here—I mean, inspection as to all the different points suggested during the course of this enquiry, such as the vessels having steam fans, preventing the cattle being loaded on the hatches, with regard to the space occupied by each, as to there being a sufficient number of cattlemen to attend the animals, as to their being sufficient arrangements on board each vessel to provide fresh water, and the different other suggestions made in this direction—do you think there should be a Government inspection as to all these arrangements?—A. I think that if there are a large number of cattle shipped from a port there should be a person appointed to make an inspection for those purposes.

Q. The Veterinary Surgeon has nothing to do with the seaworthiness of the ship or the strength of the fittings on board for the cattle?—A. That devolves on the port warden, if the vessel is partly laden with grain.

Q. If she is not partly laden with grain she does not need to come near the port warden for a certificate?—A. No, sir.

Q. Do you think there should be a law under which rules would be made, and which would prescribe how these things would be done, before the vessel went to sea, so as to prevent, if possible, the mortality of animals on some vessels?—A. Yes; I

think there should be such inspection, but as to the steam fans, which were referred to, I do not think they are required on board a vessel after she leaves the port of Quebec.

Q. That may be so as regards the journey between Montreal and Quebec, but we have evidence that if they have to batten down the hatches at sea, on account of heavy weather, the animals sometimes smother for want of air?—A. Of course, if you have to batten down your hatches at sea and any mortality from suffocation occurs it would be better to have steam fans, but the mortality amongst animals from heat generally occurs between Montreal and Quebec. I believe the steam fans are generally put ashore at Quebec.

Q. Do you think that steam fans are expensive things to fit up in a vessel?—A. No, sir.

Q. It would not be much expense for any ship coming to load cattle in this river to put up steam fans?—A. No; it would not be much expense; it is a mere bagatelle; they can easily hoist the fans on shore with their cranes when they do not want them.

Q. But suppose the Government should direct that every vessel carrying cattle was to be fitted up with electric lighting, that would be a more expensive matter?—A. Yes; I should think that would be a very expensive matter. The electric light is not long in vogue on passenger ships, and I do not think they could put up electric lights on a cattle boat unless the boats are specially built for the carrying of cattle.

Q. It has been suggested that it would be a great benefit to the sailors and to the cattle men if ships carrying cattle were fitted up with electric light, because in case of a storm at sea a man going amongst the cattle with a hand-lantern is, so to speak, handicapped in his work, and incurs some danger, whereas the danger would be lessened and the convenience greater if the vessel carried the electric light?—A. I certainly think it is dangerous for men to go about on ships with hand-lanterns. If you make this law compelling vessels to have the electric light, it would prevent transient vessels or "tramps" carrying cattle, because they could not go to the expense of fitting up the electric light. It would confine the business entirely, in my opinion, to regular line steamers, because the "tramps" would not fit up the electric light for one cargo.

Q. Did you ever see any cattle loaded on the hatches of a steamship, the hatches being covered with a removable floor, and stalls built on them?—A. Yes; I have seen cattle on the hatches.

Q. Do you think it is a good plan to place cattle on the hatches of a steamer?—A. No, sir; I do not. I am opposed to placing cattle on the hatches, because it prevents the ventilation of the lower decks; and in the case of fire or accident there is not sufficient means to move about in the ship.

Q. You are acquainted with the fact that vessels have loaded cattle at the port of Quebec?—A. I have seen them loading cattle at Quebec.

Q. Where did they load the cattle there?—A. Either at the Grand Trunk wharf or at the Louise Basin. The vessel had gone into the basin, and the railway cars were brought alongside of the ship, and the cattle put directly from the cars into the ship.

Q. What is your opinion as to the facilities for loading cattle on board ship at the port of Quebec?—A. The facilities are excellent. There are, of course, no special facilities, but the situation of the dock, and the fact that trains can be brought alongside, makes the shipment of the cattle a very easy matter. It makes it very comfortable for the cattle, and saves them a lot of abuse, which they would otherwise be subjected to. There is, of course, a rise and fall of the tide to contend with, but that could easily be got over, and will be overcome altogether by-and-bye.

Q. Can these cattle vessels load in the inner basin, at Quebec?—A. My opinion leads me to believe that they can—at any rate, there is not the slightest doubt that they can load in the outer basin.

Q. Do you think that cattle vessels can load at either the inner or the outer basin?—A. Yes; I think so. There is no difficulty, at all events, in the case of the outer basin.

Q. And the cars come alongside of the basin?—A. Yes; the cars come alongside of both basins.

Q. Have you seen cattle landed from the cars and loaded on the vessels in the outer basin?—A. Yes, sir.

Q. Were the facilities for loading them good?—A. Yes, the facilities were excellent. There would be no difficulty whatever in loading them at the proper time of tide.

Q. Is the weather generally cooler here than it is at Montreal in midsummer?—A. Certainly it is cooler here, and much better in every respect for the cattle. No matter how hot the weather is, there is always a breeze blowing here on the wharves in Quebec.

Q. Do you think you can load a large number of cattle here from the cars to the steamers?—A. Yes; I think we can load a very large number.

Q. Can you load a hundred thousand during a season?—A. Yes; we can load more than that with very little trouble here.

Q. You can load on board the steamers and accommodate at Quebec all the cattle which can be sent here for shipment?—A. Yes; we can load all that can be sent here for shipment for many years to come, without any difficulty.

Q. You have no stock yards here to rest the cattle after arriving on the railway trains before putting them on board the ship?—A. Not in Quebec, but there are some at Point Levis, at the Grand Trunk station. It is a very easy matter at Quebec, I should think, to provide this accommodation for the cattle.

Q. Do they ever load cattle on the outward-bound ships at Point Levis?—A. Yes, sir; they have done so for years.

Q. The shipment of cattle in former years has been mostly been carried on at Point Levis?—A. Yes; until last season. It is only within the last two years that the Basin has been finished at Quebec. Any cattle shipped from Quebec formerly were shipped from the Grand Trunk wharf at Point Levis. That is before the Louise basin was finished. I think last year was the first year that we have shipped cattle from the basins here.

Mr. McLAUGHLAN, Vice-President of the Ship Labourers' Association of Quebec, and ex-Municipal Councillor of that City, asks the witness:

Q. Are you aware that cattle have been shipped from Quebec which have not been loaded at either the outside or the inner basin?—A. The only other place I know of is at the Grand Trunk wharf at Point Levis. I know that cattle have been loaded at that place.

Q. Do you remember anything about cattle having been shipped at Allan & Rae's wharf at Quebec?—A. I do not remember.

Q. Then they must have gone away without inspection, if they were loaded there?—A. Not necessarily. It is quite possible a few cattle might have been taken across on the ferry from Point Levis and put on board the steamer. I would inspect the vessel afterwards, but I might not know where the cattle came from.

Q. I am referring to a case in which a steamer came from Montreal and brought her cattle men from that port. The cattle were driven to the Allan's wharf and put on board the steamer there?—A. That would not come under my inspection. When the cattle were put on board, the agents of the ship would telephone for me, and I would go there and inspect the ship. I would not know in going through the ship where the cattle referred to came from, whether from Montreal or from Levis, or from any other place, but I have not the slightest doubt that they would be inspected by Dr. Couture, the Veterinary Inspector.

By Mr. Smith:

Q. In that case you would simply see that the ship was sea worthy?—A. Yes, sir; that would be my duty. After shipping the cattle the agents of the vessel

would send to me, and I would see that the vessel was seaworthy. Such cattle might be driven from the station to the wharf, and I would not know anything about it. I know that on the Grand Trunk wharf, which is a terminus of the road, there is a place to put the cattle, and from which they load them on board the vessel. It has the same tide to contend with as any other wharf in Quebec has.

Q. Do you know if there is likely to be any extensive trade in shipping cattle from the lower part of the Province of Quebec to England? Do you know if there will be any surplus cattle to export from this part of the Dominion to England?—A. There are a great many cattle raised in the lower part of this Province, and a great many are brought to market and sold here. I think, however, they are sent to Montreal for shipment to England. What the exact number of such cattle would be I cannot say.

Q. Do you think the farmers of the lower portion of the Province of Quebec have any cattle to dispose of for shipment to England, in addition to what they sell for local purposes?—A. I should think so. I think the cattle are bought by dealers at Quebec and taken to Montreal.

Q. They are not shipped here?—A. No, sir.

Q. You think there is a surplus of cattle in this portion of the Province of Quebec which might be shipped to England?—A. No doubt there are. Large numbers of cattle are brought in here by the farmers, fattened during the winter, and then sold.

Q. Do you think there is any dealer in Quebec that would purchase such cattle for exportation?—A. Up to the present a trade has not been organized in Quebec for that purpose.

Q. And unless traders come here to purchase the cattle, and collect them together for export, as they do in Ontario, I suppose the trade could not be very well carried on at this port?—A. Of course, there is no single farmer who would have sufficient cattle to enable him to ship them himself, but there are many farmers all over the country who have small numbers of cattle. If they were collected together they could be shipped.

Q. Unless the cattle exporters of Montreal and Ontario are willing to come here and gather their cattle together at this port for shipment, you do not see how this can be made a point for the shipment of cattle?—A. I do not see why they cannot do the same here as they do in Montreal, and if there are any men here in the trade to purchase from the farmers they could collect the cattle in sufficient quantities for export and ship them from Quebec. There are, however, I understand, no large traders here at present to do this.

By Mr. Turner :

Q. Are you aware that in Montreal some vessels have as many as twenty different lots of cattle on board?—A. That is quite possible. But each farmer in the neighbourhood of Quebec would not be able to ship the few cattle that he would have to dispose of.

By Mr. Smith :

Q. The exportation is done by these cattle exporters buying what they call a "bunch" of animals from the farmers, and shipping that "bunch" on board the vessel, and there may be, as Mr. Turner says, twenty different shippers having cattle on board that vessel?—A. We have farmers in the Eastern Townships of the Province of Quebec who might have twenty-five or thirty head of cattle to ship, and I suppose they could ship them without the interference of any intermediate party.

Q. But up to the present time the purchasers of cattle belong to Montreal, and after buying them in the neighbourhood here they take them to Montreal and ship them to England?—A. Yes; I know that in some cases they take the cattle from Quebec to Montreal and ship them to England.

Q. And it would be shorter and easier to send them from the port of Quebec if there were any cattle dealers here?—A. Yes; that is so.

Q. Would it be advisable to have a restriction on every vessel clearing from here, whether loaded with timber or any other cargo, and to provide she should have a certificate from the port warden, in the same manner as is at present the rule in Montreal?—A. It would be a safeguard. If it is a good rule in one place it should be done in another.

Q. But would it not be a burden on the shippers, who do not require any certificate at present? For instance, in the case of a vessel loaded with timber, which is not leaking and is not laden below the Primsoll mark, would it be any benefit to have her inspected by the port warden, and to prevent her getting a clearance before she got a certificate?—A. You would know then for a fact whether she was properly loaded or not, but at present they load as they like.

Q. Would it not be an objection on the part of the agents of the vessels, who ship the cargoes, to have to get the port warden to inspect the vessel and give a certificate?—A. I do not see why the grievance should be any more than in the case of a vessel carrying a very small quantity of grain. A ship may be laden with one-fourth or less of grain and the remaining cargo of some other description, yet she has to get inspected and submit to the same law. If she loads altogether with timber there is no restriction, and I do not see what the difference is.

Q. The difference is, that vessels laden with grain, and improperly laden, are unsafe, and drown the crews. I think it was in the year 1872 that six grain-laden vessels were lost and the crews drowned. We passed a law at that time to the effect that any vessel wholly or partially loaded with grain should not leave the port unless she was inspected by the port warden, both as regards the physical state of her hull and as regards her loading. The law provides that vessels carrying grain must be fitted up with shifting boards, so as to prevent the cargo shifting. In the case of vessels laden with timber the cargo does not shift. That is the difference between putting the owners of the cargoes of timber to the expense which the owners of cargoes of grain have to incur. The two cargoes are quite different. The one is a safe cargo, and even if the ship is leaking, so long as she holds together she can carry the timber across. In the case of grain it is very different. If there is a defect in the hull of the vessel, or if the grain shifts in heavy weather (as it is almost sure to shift if the vessel is not fitted with shifting boards), the vessel gets on her beam ends, and being unable to right herself, she is lost. That is the difference between inspecting a vessel laden with grain and inspecting a vessel laden with timber. Probably the owners of vessels laden with timber or deals would complain of the expense of their vessels being inspected. Of course, when it comes to the 1st of October vessels laden with timber must get a certificate from the Custom House to the effect that they have not over 3 feet of deals or lumber on the deck, if they are clearing for England?—A. There is not the slightest doubt that a grain cargo is very dangerous if it is not properly loaded, but if properly loaded it is as safe as any other cargo. There is no difference whatever, if a ship laden with grain loses thirty men or a ship laden with timber loses thirty men. If a vessel is badly laden with timber it would seem to me as bad as if she were improperly laden with grain.

Q. Do any timber vessels leave this port in the summer laden with timber which are not properly loaded?—A. Yes; I believe there are some.

Q. Do you think there is any large number?—A. I would not say there is any large number, but there are some.

Q. Has your attention been called to this matter?—A. Yes, my attention has been called to it.

Q. And when your attention was called, what steps did you take?—A. I had them examined, but unless some interested party comes and makes complaint I cannot interfere in the case of vessels loaded with timber.

Q. If the sailors, for instance, come and complain to you?—A. Yes; or if the owner of the cargo, or any one interested, should come.

Q. The owners of the cargo would hardly come, because they put it on board. The sailors or the owners of the ship might be interested to some extent, but hardly the owners of the cargo?—A. Sometimes the owner of the ship might get fright-

ened and come to the port warden for a certificate, in case their insurance might be in danger.

By Mr. Turner:

Q. Is that only in the case where a lump sum is charged?—A. I cannot say that, but I know that in one case the captain came to me to know whether he should go to sea or not, as he was scared about it.

By Mr. Smith:

Q. And in that case did you make him take part of the cargo off the ship?—A. No; I found the ship was fit to go to sea.

Q. Do you know of any case in which you ordered a portion of the cargo to be taken off the ship?—A. I had a case in which I had to take a portion of the cargo off. The ship was loaded in Montreal, and she was so crank that I had to look to it and take a portion off.

Q. The ships load with deals on the deck in summer?—A. Yes. The case to which I referred occurred in midsummer. The ship was so crank when she came here that I was applied to, and they took off most of the deck cargo.

Q. Do you think it would be of sufficient importance to have a law made, as has been suggested, to the effect that any vessel of any kind should not leave the port without the port warden's certificate? Do you think that the awarding of the certificate would prevent such danger as to induce the trade to consent to have every vessel inspected before she could proceed to sea? In such a case as you have referred to, if the vessel were overloaded on the deck, the port warden would come in and pronounce it unsafe and make them take off a portion of the cargo. Do you think the trade would consent to this regulation and would consent to the payment of a fee to the port warden for his services?—A. I do not think the trade would consent to it, because it would be their object to save as much expense and to carry as much cargo as they could.

Q. And such regulation would be met with the objection that it would provide restrictions and increase the cost?—A. Yes.

By Mr. Turner:—

Q. Would it not be a protection to the underwriters?—A. It would be a protection to the underwriters and the crew on board.

Q. Take the case of the "Canopus," which vessel you were called upon to survey. When they found you would not give them a certificate, unless the vessel was properly examined they ignored your authority, and they called in another inspector who gave a certificate. The result of this was that the vessel proceeded to sea and arrived safely, but if she had met with stress of weather the probabilities are that she might not have arrived safely?—A. That is quite so. If there is no person to represent the underwriters when the cargo is shipped, the vessel is often not inspected.

Q. And you think your hands should be strengthened in the matter?—A. I think so.

By Mr. Smith:

Q. And you think that every vessel should be inspected before going across the Atlantic?—A. I think they should all be inspected.

Q. Would not that be putting a great deal of power in the hands of the port warden?—A. Yes; but I think there should be a Board of Appeal. I do not think the entire responsibility should rest with one man. It would not be fair to place all the responsibility on the port warden.

Q. You think in case of a difference of opinion that there should be an appeal?—A. Yes; there should be some one to appeal to.

Q. Do you consider there should be an appeal to the Council of the Board of Trade, as is the case in Montreal?—A. Yes; I approve of that. In the case of the

"Canopus," which Mr. Turner referred to, I said I would not give a certificate until I thought she was fit to go to sea, but they called in outside parties to approve of the vessel, and sailed on their own responsibility.

Q. The vessel arrived safely on the other side?—A. Yes.

By Mr. Turner :

Q. The report of the Board of Trade and the report of the port warden had the result that the responsibility for the value of the cargo was thrown on the owners of the vessel, and the Underwriters relieved themselves of this responsibility when the circumstances of the case were cabled to them and the facts made known.

Mr. SMITH.—If there were a law in Quebec similar to the one in Montreal, which states that every vessel must have a certificate before she gets her clearance, the vessel could not have gone to sea.

Mr. TURNER.—Certainly the vessel would have had to have got a clearance before she went to sea. It appears the graving dock was not vacant at the time she came here, and it was a case of stubbornness between the captain and others concerned that caused her to be beached here without coming into the graving dock. Whether she might have been inspected between tides and gone to sea afterwards I do not know. I think it was a question as to the objection raised by the port warden to give her a certificate until she went in to the graving dock and was examined, to see whether she could go to sea with temporary repairs.

By Mr. Smith :

Q. Was it not a matter of expense to go into the graving dock?—A. Yes; it would have cost her perhaps \$500 to go in the graving dock. There was a vessel in the graving dock, and after I examined the "Canopus" I recommended her to wait until the other vessel came out of the dock and then she could enter the dock. However, they put her on the beach. She ran aground coming up the river, and was balanced aft and forward on a reef, without breaking away anything. Her keelson was sprung, but I never saw a ship come off with so little damage. She was several days before she got her cargo out and during this time she was balanced aft and forwards. At some places you could walk under her keel at low water. After she got up herefrom Rivière-du-Loup, she lay in the basin, at my advice, waiting for her turn in the graving dock, but a new captain came out here and put her on the beach.

Q. Did it not injure her to put her on the beach?—A. I do not say it injured her, as it was a pretty even beach, but I could not make a proper inspection of her in the position she was in. Two patches were put on the bilges under my instructions, but I said that I did not accept that as full repairs, and I would not give my certificate until I saw the bottom of the ship. They put those patches on when I had no opportunity to examine the keel, and I would not give her a certificate.

Q. Why did they put these patches on?—A. Because there were holes in her.

Q. Did they put them on with iron plates?—A. Yes; they were quite large patches—some of them were 4 feet by 6, and some 4 feet by 3.

Q. I suppose she had them permanently repaired in England?—A. Yes; but she might have gone to the dock here, and have come out in 24 hours properly repaired.

Q. Of course there was the objection of paying the \$500, I suppose, as well as the delay?—A. Yes.

Q. I suppose they could have repaired her as well here as in England?—A. Yes.

Q. If I remember right the "Polynesian" was repaired in the graving dock here just as well as it could be done in the old country, and after she returned home she was pronounced as well repaired as if it were done in Glasgow?—A. Yes, she can be just as well repaired here. The "Norse King" was repaired here this season, and very extensive permanent repairs were done to the "Lake Huron."

Q. Then you consider the graving dock of great benefit to the port of Quebec?—A. Yes, it is of great benefit for either permanent or temporary repairs to vessels.

Q. Do you think that either temporary or permanent repairs could be done to steamers here as cheaply as in England?—A. Just as cheaply. The "Oregon" was

temporarily repaired here in a few days. She afterwards went to Montreal and took a general cargo and sailed for England.

Q. Then you think it would be of great benefit to the trade of the port, although the merchants and owners might be against it, to have every vessel inspected here before she went to sea?—A. Yes; I think it would be a great safeguard.

Q. What would the inspection fee be for each vessel?—A. Five dollars.

Q. And you think the inspection would be worth the cost to the vessel?—A. Yes; I think so. It is a mere bagatelle compared with the value of the cargo and ship, and the safety of the lives of those on board.

Q. And you think that in some cases a portion of the cargo would have to come off where persons might be inclined to overload?—A. Yes; there are no restrictions now, and timber can be loaded as they like.

Q. About how much deck cargo would a thousand ton wooden vessel take?—A. They sometimes pile it up to the top beams, or to a height of between 7 feet 6 inches and 8 feet.

Q. That is a large vessel of a thousand tons?—A. Yes, sir.

Q. Did you ever see a vessel of that description leave the port listed over to one side?—A. Yes, sir.

Q. And in that case you think it is not very safe?—A. No, sir; the timber sometimes goes overboard and some one has to pay for it.

Q. That is the deck cargo?—A. Yes, sir.

Q. Do you know of any losses caused to deck loads on vessels which sailed from here before the 1st of October?—A. Yes; I should think there are a good many deck loads lost.

Q. Mr. Plimsoll told me that when he came out here in December, that the vessel on which he was, passed through large quantities of timber in the Atlantic. Where could these deals come from? Would they come do you think from United States ships laden with lumber; because they hardly could come from vessels sailing from Canadian ports, as they cannot carry over 3 feet of deck load after the 1st of October. Mr. Plimsoll seemed to think that those were deals newly thrown into the sea?—A. They could not have been long in the water at all events, because if they were they would be scattered before he could see them. It might be that some ship had thrown them over shortly before his steamer came along. They might throw over a deck load of 3 feet as well as a deck load of 6 feet.

Q. Then would you indicate that even a deck load of 3 feet was not safe?—A. That depends altogether on the ship. If the vessel is loaded with dry deals and is not sufficiently ballasted perhaps she might not be fit to carry any deck load at all.

Q. You have not heard of any accident occurring to any vessels sailing after the 1st of October, and which carried a limited deck load or 3 feet?—A. Oh, no; I was not objecting to a deck load at all, but I should think it should be limited.

Q. You think that a 3 feet deck load is a safe and fair allowance?—A. Yes.

Q. You would not recommend that a ship be allowed to carry any larger deck load?—A. No, sir.

Q. You would not recommend the law being altered so as to prevent them taking any deck loads at all?—A. No, sir; I do not think there is much danger from a deck load limited to 3 feet.

Q. But Mr. Plimsoll proposes by his Bill to prevent them taking any deck load after the 1st of October?—A. I think that is restricting the trade too much. A proper deck load, properly fitted up, is as good as the deck of the ship for the sailors to walk on and to handle the ship. Deals do not weigh much, and altogether I think there is little if any danger—that is, with a limited deck load.

MR. SMITH.—There is a shipper in the Lower Provinces who owns a large number of ships, and he is pressing that the law be altered so that every ship shall be allowed to load deals up to the top of the rail. He says that it is safer than a 3 feet deck load, because in the case of shipping a sea with a 3 feet deck load a large portion of the water remains on the ship. He says that we should do away with these three 3 deck loads, and allow the ship to load to

the rail, so as to make a flush deck. These are his opinions, but I may say that I hardly agree with him. A. Neither do I agree with them. They should have proper arrangements on deck to allow of the water running off that comes on board.

Q. You contend that a 3 feet deck load is safer than a 6 feet one?—A. Oh, yes; by all means.

Q. For the winter?—A. At any time of the year. But at the low rate of freight which is now in force you must be liberal with the shipowners as well, at the same time that you protect lives and property.

Q. Do you think that it would be a good thing to have any regulation with regard to the carrying of deck loads in summer?—A. There should be some inspection to see that nobody would be allowed to go to extremes. I believe that we ought to be governed by law at all seasons.

Q. You think that if there was an inspection by the port warden he would see that the deck load was not too much for the vessel, and that this would be one of the benefits of the inspection?—A. Yes; that would be one of the benefits, and even then it would be rather difficult to judge of a ship, because in the river she might be perfectly upright, but when she gets a breeze of wind it might throw her over. It depends altogether on how a ship is provided to carry deck loads; if there is good ballast she will carry a good deck load, but if she is not ballasted she will not carry a deckload at all.

By Mr. Smith:

Q. Do you think it would be a good law to provide that no vessel should carry more deck load than up to the top of the rail in summer?—A. It would be a very good law, but you would have to make a law to fix the height of the rail, because the owner of one vessel may make his rail 7 feet high and the owner of another vessel would only have it 5 feet high.

Q. You think a law passed on that basis would not work well?—A. It would fix the height of the deck load but it would not fix the height of the rail,—at all events, a great deal would depend on the loading of the ship. There are many vessels which carry a large quantity of timber, and if it is not properly loaded it is very often a dangerous cargo. Whatever regulations are passed should be devised with the object of protecting life and property, as well as giving every fair advantage to the owners of the ships to make a profit.

Q. You think it would be well to make a port warden law for Quebec, the same as is in force in Montreal?—A. Well, I think it would be well to make a law pretty near the same as in Montreal.

Q. Do you think the same rules would work at Quebec as work in Montreal?—A. The same rules would hardly work, because in Montreal everything has to pass through the port warden's office, which is not the same here.

Q. Do you think it would be a good rule to make a provision here requiring everything to pass through the port warden's office, as is done in Montreal?—A. You see it is different here; there is no private wharf property in Montreal, as it all belongs to the Harbour Commissioners.

Q. But so far as the rule is concerned that all vessels leaving the port of Quebec should come under the port warden's inspection?—A. Yes, so far as that is concerned, it would be a good thing to make the rule. I do think the deck cargo should be limited to not higher than the quarter rail.

Q. Do many steamers take deck loads of lumber here after the 1st of October?—A. There have not been a great many loaded with lumber here, but all those that have taken lumber have taken as much as the law would allow them.

Q. Did it not make some of them top heavy?—A. To my knowledge, none of them have been crank.

Q. You say there are very few cases of vessels which you have been called upon to examine that have been crank?—A. Very few. There were only two this summer. One went as she was; on the other I took off part of her deck load.

Q. Did the sailors or the insurance companies complain?—A. It was the captain of one vessel. I complained to the captain, and he asked me to come on board with a couple of other captains, and we decided that we should take off some of his deck load.

Q. Why did you take two other captains with you?—A. He was Norwegian, and he wished to have the opinion of some of his own countrymen on the matter.

Q. I suppose for his evidence at home?—A. Yes.

By Mr. Turner :

Q. Do you represent any of the insurance companies?—A. Yes; I would not have any power over this captain, as port warden, if I did not represent the underwriters. This captain was insured in a club which I represent, and I called his attention to the overloading, and told him that if he went to sea that he would go on his own responsibility. He disputed this, and I said: "We will call in a surveyor." He named two Norwegian captains. We went on board and inspected her and we decided that she was too much overloaded, and that he should take off a portion of the deck load. I exercised that power as representing the Insurance Club, but I would not have the same power in my capacity as port warden.

Mr. SMITH.—I understand that Mr. Simons is not only port warden but surveyor for the Bureau Veritas of Lloyds. This institution has its headquarters in Brussels, and any vessel registered in the Bureau Veritas that met with an accident would require to get the repairs made under his inspection and direction. Besides that, Mr. Simons discharges the duty of port warden, and the two duties, I believe, are not inconsistent. When the late surveyor for Lloyds retired I was consulted about another man to take his place, and I recommended Mr. Simons for the position; but when I was in London recently the Lloyds sent for me and said they would be very happy to appoint Mr. Simons on my recommendation, but that it appeared he was surveyor for the French Lloyds, and that precluded him from acting for them. Mr. Simons, therefore, has experience, not only as port warden, but in his capacity of inspector for the French Bureau Veritas.

Mr. SIMONS.—On account of my position as representative of a number of insurance offices in Norway, I have more power over these Norwegian vessels than I have over them as port warden.

Q. And all repairs they need have to be done under your inspection?—A. Exactly; it is just the same as in the French Lloyds. I have the power to say to a captain: "Your ship is not fit to go to sea," and I stop him, as agent for the insurance companies, but I cannot stop him as port warden for Quebec.

Q. We have heard a great deal about Canadian ships and old British ships being worn out, and when they are no longer able to get any classification at Lloyds they are sold and transferred to the Norwegian flag and trade as Norwegian vessels. Do you know of any such cases?—A. I do not think that is the real fact of the case. I think the fact is, that in England they are building iron vessels and the Norwegians are buying the wooden vessels from the English.

Q. Do you know of any old rotten vessels which cannot trade out of England, because they are deficient in seaworthiness, being transferred to the Norwegian flag?—A. Not many. There are some first-class vessels that come here as Norwegian vessels, and I know them to be good vessels.

Q. Is it not the rule that they are worn out vessels that have taken refuge under the Norwegian flag, because they could not carry cargoes out of England?—A. That is not the case to any extent. We have the "Adorn," as fine a ship as there is sailing to-day, and she is the New Brunswick ship. These wooden vessels were sold by the British owners to the Norwegians because the British owners were going in for iron vessels.

Q. Is there any case that you know where they are worn out and rotten?—A. No; but there might be some of those vessels that could not get a class in England at all.

Q. What do you do when you get a vessel unclassified coming here for timber, and you do not consider her safe with a heavy top cargo?—A. I have not had any case of that kind under my notice. Those Norwegian ships coming here which I have been referring to were either classed in the French Bureau or in the Norwegian Registry.

Q. There are no "wild cat" ships, trading to this port, which are so bad that they cannot get a class?—A. There are some coming here without a class, but I have nothing to do with that case because they are not in my office.

Q. Do you know why they are not classed?—A. I suppose because some of them are not good.

Q. As a rule, most of the ships that come here are good?—A. Yes.

Q. And just as good as our own British vessels?—A. There are many of them our own old British vessels, which are kept in good repair, and would be in the British trade yet if it were not for the change from wooden to iron ships. I may say that some of them sail under the Norwegian flag and carry Norwegian captains and crews. I believe that the Norwegians are, to some extent, better sailors than the English. They are more reliable men, the captains are very intelligent, and the crews belong to their own place at home, and the men are more obedient to the captain. They will do more than some of the English sailors.

Q. And I suppose they can live much cheaper than the English sailors?—A. Well, I do not know that they do.

Q. It is said that they live altogether on pork and cheap food?—A. The men are well treated. They get their coffee every afternoon and morning. As a rule I find the Norwegian sailors better treated than the English, and I believe they are better men.

Q. And these ships are run under the Norwegian flag because of the change in the mode of trade by which English shipowners are going in for iron vessels?—A. That I say without fear of contradiction.

Q. Some persons who have attacked Mr. Plimsoll have stated that his legislation has injured the British ship trade, and the Canadian trade as well, because it has forced these vessels into the Norwegian Register, instead of allowing them to remain in the British or North American Register?—A. There are vessels which come here under the Norwegian flag which are owned in England, but it must be remembered that there are a great many wealthy Norwegians resident in England who may own those ships.

Q. But still, are there some Englishmen running their ships under the Norwegian flag to avoid inspection?—A. I do not know and particular ship which is run under the Norwegian flag for that reason.

Q. Would they have changed their register from the British to the Norwegian flag if it were not to escape this inspection?—A. I do not know; I have known men in Quebec who have shares in Norwegian vessels.

Q. You have known Norwegian captains here?—A. Yes, sir.

Q. How did they like coming to Quebec, have they anything to complain of about the Ship Labourers' Society?—A. No; I do not know that they complained of anything in that direction, but of course they complained of the expense. They do not complain so much, but they say that everything is so much higher here than it is at home with them. Of course, in Norway everything is cheap. The repairing of their ships is higher, and the loading of the ships is higher here than in Norway.

Q. Have you heard any complaints of the expense of loading ships here from them?—A. I heard no complaints, except the general complaint, that the expenses here are higher compared with their own country. The seamen are very obedient to orders; they do all they are told; they very seldom make complaints.

Q. Are they well satisfied that their seamen are well taken care of when they get ill here, and the knowledge that there is a splendid institution to take care of them?—A. I have heard no complaints.

Q. You know how the seamen are taken care of now. Strangers have a splendid hospital here in the Hotel Dieu and the Jeffry Hale Hospital, where they are well taken care of and properly treated during their illness. The nurses are first-class people,

some of them of good families, and every care is taken of those who are ill?—A. I have always heard that strangers coming to this port are quite satisfied with the accommodation they get when they are sick.

Q. They feel that they have as good attendance at Quebec in that way as they have at any other port in the world?—A. Yes; I think so, at all events, they never complain.

By Mr. McLaughlan:

Q. Are you aware that under Mr. Plimsoll's Act English vessels which were condemned and could not get a classification have sailed under the Norwegian flag and with a Norwegian captain, and although no repairs are made on them they continue in the trade and are the property of English owners?—A. I think that I have already said that there were ships sailing under the Norwegian flag which were still controlled by English owners. As regards the latter part of the question, I do not know whether they were condemned in England under the Plimsoll Act or not.

Mr. McLAUGHLAN.—I can tell the Commission that there are ships sailing to this port in a similar position to that which I have indicated, and I can tell further that they are run 75 per cent. cheaper under the Norwegian Flag than if they were under the British flag.

Mr. SIMONS.—That does not say that they are not good vessels.

Mr. McLAUGHLAN.—I know of such vessels, and I can give the Commission the names of numbers of old English vessels so condemned in England which are sailing under Norwegian colours. I say further, that the British sailors live much better and get better fare than the Norwegian sailors.

Mr. SMITH.—Do you say that a vessel can be run cheaper under the Norwegian flag than under the British flag?

Mr. McLAUGHLAN.—Yes; she can be run 75 per cent. cheaper.

Mr. SMITH.—Of course, in England a foreign vessel comes under the same law as regards loading and over-loading as an English vessel.

Mr. McLAUGHLAN.—I cannot say as regards the English law, but I know that in this port the Norwegian vessels are run much cheaper than the English vessels.

Mr. SMITH.—But there is no preference given to foreign vessels over English vessels here.

Mr. McLAUGHLAN.—That is so. It is mostly Norwegian vessels that come here, and I can speak as to them.

By Mr. Smith.—(To Witness):

Q. I suppose you mean by your evidence that the Norwegians have few or no steamers?—A. They are getting into the steamship trade now. They have got a number of steamers.

Q. Do these steamers come to Quebec?—A. Yes; there is the "Bradensburg," which was built in Germany. She is a Norwegian vessel now, and, together with a sister ship, she is carrying in Canada under charter for the whole summer.

Q. Do they take any cattle?—A. No, sir; they are under charter in Canada, but are registered in Norway.

Q. Do you think these foreign ships chartered in Canada should be exempted from the inspection dues which our own vessels have to pay?—A. I do not think they should be exempted; I think all vessels should come under the same inspection when they enter the Canadian trade, and it would be unfair to run these vessels if they were exempted from the inspection dues.

Q. The people who charter those vessels have waited upon me by deputation in Montreal and have expressed the wish that vessels chartered from the other side should be exempted from inspection dues?—A. I think they all should be inspected, but of course it might be different if they bring a proper inspection certificate from the old country.

Q. The question is, should they be exempted from payment of inspection dues here?—A. I think not. When they come to trade here and to make money I think they should pay their share of the expense, as well as our own vessels.

By Mr. Turner :

Q. Mr. Simons, do you consider that the owner of an English sailing ship can compete profitably with a vessel that is owned by a Norwegian?—A. Well, he does not seem to.

Q. But what is your opinion?—A. Well, if he has an intelligent captain I do not see why he should not.

Q. I ask this question, because the general impression seems to be that the cost of living for the captain and crew, and the cost of running an English ship, is much greater than the cost of running a Norwegian ship. The impression generally prevails that living on board a Norwegian ship is not so expensive as on board an English ship, and that the men are satisfied with less food and with lower wages than the British sailors?—A. That is not my experience. Bills have come before me from Norwegian ships under claims of detention of the ships and crews, and the men on the Norwegian ships were paid the same or nearly the same as the British sailors. I think I might say further that the captains of Norwegian vessels are paid more than the captains of British ships, because the Norwegian captains also get a commission. It is frequently the case that the crew of a British ship desert, which is the cause of much expense, whereas the crew of a Norwegian ship seldom or never desert. The Norwegian sailors are more amenable to orders, and in my opinion there is more discipline on board. If you once go on board a Norwegian ship and show any official authority they are ready at the instant to give all the information they possess, and never give you any trouble.

By Mr. Smith :

Q. How does the salary of the captains of British ships compare with the salary of the captains of Norwegian ships?—A. I have said before that I think the Norwegian captains are better paid. From the information I have, it shows me that the money paid to the crew of a Norwegian ship is about the same as that paid to the crew of an English ship. The captain gets enough to keep him, and not only that, but he gets a commission on the gross business of the ship.

By Mr. Turner :

Q. Do you consider that the carrying of a full cargo of cattle on the spar deck or on the upper deck interferes with the working of the ship?—A. Well, unless they provide a proper covering over the stalls it seems to me that it would interfere to a certain extent, because you must remember that spardeck vessels may be of different construction. In some vessels they may carry cattle on the spar deck just as easily as they can carry cattle on the main deck, or the other decks of other ships.

By Mr. Smith :

Q. It is asserted by Mr. Plimsoll that they cannot carry live cattle on the spar deck without interfering with the working of the ship in heavy weather?—A. In many steamers they can carry cattle on the spar deck without at all interfering with the working of the ship. Of course, we must remember that a steamer is quite different from a sailing vessel. I think that if the cattle stalls are covered in properly and there is proper communication fore and aft there should be no difficulty in working the ship.

By Mr. McLaughlan :

Q. Are you aware that there is a vessel lying in the basin at present, called the "Ulrika"?—A. Yes.

Q. Do you know that she was water-logged down in the Saguenay?—A. I do not know that she was water-logged, but I believe she leaked.

Q. Would you inform the Commission to what class she belongs?—A. I have already stated that there are ships coming here that are not classified at all. Unless vessels are insured in the Clubs which I represent I cannot say as to what class they belong.

Q. If the "Ulrika" were an English ship, do you think she would be classified?
—A. I am not prepared to answer that.

By Mr. Smith:

Q. Was the "Ulrika" wrecked?—A. No; she loaded in the Saguenay, and having been found to leak her load was discharged and she was sent up here.

Q. Was she a Norwegian vessel?—A. Yes.

Q. Was she old?—A. Yes.

Q. How many years old, can you say?—A. I should think she was about thirty years old. She is one of those vessels which are not classed, and I have nothing to do with her.

By Mr. McLaughlan:

Q. If she were unseaworthy, would she get a class in England?—A. No; if she were unseaworthy she would not get a class anywhere.

Q. Perhaps she is one of those vessels which could not get a class in England under the Plimsoll Act, and was therefore transferred to the Norwegian flag?—A. I cannot say as to that.

Q. Are they doing anything with her this winter?—A. No.

By Mr. Smith:

Q. If she were a British ship would she be allowed to leave the port of Quebec?—A. Nobody would hinder her.

Q. If she were a British ship and unseaworthy, would she be allowed to leave the port of Quebec?—A. If anybody objected to her she would not be allowed to leave. If she is not loaded in whole or in part with grain, the law does not require the port warden to go on board, unless some one speaks to him about her and and calls his attention to her.

By Mr. McLaughlan:

Q. I suppose you are aware that the owner of the cargo or the owner of the vessel would never come to you to speak about the unseaworthiness of the ship?—A. I have heard complaints about a ship sometimes.

By Mr. Smith:

Q. Then, if the underwriters will insure her, she could load a cargo and go away, without anyone interfering with her?—A. All I could do in that case would be to remonstrate with the captain. But if she were insured in the Insurance Clubs I represent I would go on board of her, and not allow her to proceed to sea.

Mr. TURNER.—In this connection I would wish the Commission to lay great stress upon the Port Warden's Act. I think that at present it is not sufficiently powerful to make it applicable to the case of an unseaworthy vessel. I think that the law should be such that an unseaworthy vessel, no matter how she is loaded, should not be allowed to go to sea.

Mr. SIMONS.—At present in Quebec we have no right whatever to stop any vessel from going to sea, unless she is wholly or in part laden with grain.

By Mr. Smith:

Q. You think the port warden should have power to examine every vessel and to prohibit her going to sea without a certificate?—A. Certainly.

Q. Do you think an inspection fee of \$5 would be too much?—A. I think it would be very reasonable.

Mr. TURNER.—I think \$5 as a minium fee would be most reasonable.

Mr. SMITH.—If you are allowed such power for the inspection of vessels, do you think you yourself could attend to it in the port of Quebec?

Mr. TURNER.—You must remember, Mr. Commissioner, that our port extends from Cap Rouge to the Island of New Orleans on both sides of the river.

Mr. SIMONS, Witness.—Unless I had some further facilities than I have at present, and more income to spend more money, I could not attend to it. At any rate, I do not think that the port warden of Quebec could bear the expense without more remuneration.

By Mr. Turner :

Q. What is the total number of vessels annually clearing at Quebec?—A. About 500

Mr. TURNER.—Well, at \$5 per vessel that would be only \$2,500. It think it is very important, both for the safety of the ships and of the underwriters, that there should be this inspection of vessels leaving the port. It is a matter of surprise to me that the underwriters have not petitioned for this inspection before now. I think, further, that what applies to the port of Montreal should equally apply to the port of Quebec.

This concluded the examination of the witness.

WALTER RAY, Esq., Manager for Price Brothers, Lumber Merchants and Exporters, Quebec, gives the following evidence:—

In my opinion, a regulation providing that the port warden should give his certificate to vessels laden with lumber leaving the port of Quebec is unnecessary. We ship lumber and deals largely in the port of Quebec, and I give my statement that it would be a source of annoyance and unproductive of any good results for shippers and shipmasters to have to obtain this certificate, because I do not think it would serve any good object. The captains and crews of vessels are the best judges of the capacity of the ship to carry its cargo. As far as our firm is concerned, we make it a point to examine our vessels before they proceed to sea, and if we have any reason to believe that they are unable to carry a large deck load we call in a surveyor and have the cargo removed, if it is found too much. It is open to every person to make this complaint. I believe that until the port of Quebec becomes a grain-shipping centre it is unnecessary to make the same rules here as they have for the port warden's office in Montreal. It would be an unnecessary tax upon ships, and merely amount to a piece of red tape. It should be understood that I do not wish to curtail the revenues of the port warden's office, but I merely give my opposition to this suggestion, because I believe it is altogether unnecessary. The Commission will observe that in the case of the "Ulrika," the moment she was found unseaworthy she was not allowed to go to sea. This was done without any official inspection; and, as was the case with the "Ulrika," so it would be the case with every other ship. Without any official inspection, such as recommended, the moment she was found unseaworthy she would not be allowed to proceed. If the port warden had to make this inspection of each vessel he would require a dozen officials in his office at Quebec to do it even half satisfactorily. The vessels are not all loaded at Quebec, but at different places in the harbour, which is several miles in extent, and this would require a number of port wardens. Not only that, but it would be necessary to appoint a special port warden in every port along the St. Lawrence. In reference to the evidence given by Mr. Beckett as to the deck loads carried by ships, I should say that £100 sterling to £150 should be the average value of the deck load.

By Mr. Smith :

Q. That would be for a large ship of about 1,000 tons?—A. Yes; that would be correct if you take the average tonnage of the ships coming here. In reference to the portion of the enquiry which bears upon the cattle trade, I will state that we sometimes have brought fat cattle from the Saguenay district and sent them up to Montreal for shipment to England. If there were regular shipments at Quebec a market for cattle would be found here, instead of our having to send cattle to

Montreal. We fatten cattle in the district of Quebec and send them to Montreal for sale. They are then sent over to the old country.

Q. You think there is an opportunity here for shipping cattle, and if they once got into the way of doing it at Quebec the trade could be carried on here?—

A. Yes; and the facilities for shipping cattle here are excellent. I may state also, that I saw this year over 700 head of cattle shipped in the inner basin in the course of a few hours. I may correct Mr. Simons, if I understood him to say there were no cattle shipped in the inner basin. We have facilities here for shipping a million cattle during the season, if we had the cattle to ship. There is no lack of accommodation for the shipment of any amount of cattle to England from the port of Quebec.

This concluded the evidence of the witness.

ST. GEORGE BOSWELL, Esq., Chief Engineer of Quebec Harbour Commission, gives the following evidence:—

By Mr. Turner :

Q. I would like to ask Mr. Boswell whether it is not possible for vessels to load cattle in the inner basin at Quebec?—A. Certainly.

Q. Do you know if they loaded cattle there in a very satisfactory manner?—A. Yes; they have loaded cattle there, and it seems to have been done very satisfactorily.

Q. Were there any difficulties experienced in loading cattle there?—A. None whatever. The fact of the matter is, that it takes such a short time to load ships that one basin is as good as another. The ship is loaded in three or four hours, and in that time it does make very much difference as to the tide in the basin. If they come at high tide it is to their advantage to go to the inner basin, and they can ship cattle direct from the cars to the steamer. The process of loading is so rapid that a few hours will do the whole thing. They can get from 500 to 600 cattle on board at one tide.

Q. Do you know what was the opinions of the captains of the vessels which loaded the cattle at the basin for transportation to England?—A. I understood at the time that the captains were all well satisfied. In fact, some of them said it was the best port that they had ever been to in their lives, and that there were better facilities for shipping here than at any other place they visited. When the ship gets into the basin there is plenty of room for her, and whether it comes on to blow or not she is perfectly safe and secure against any danger or accident. The greater advantage of the port of Quebec over Montreal is quite evident from the fact that when cattle come for shipment here they are put on board in cool weather. It is cooler here than in any other port. In Montreal they are driven to the wharves, a distance of perhaps two or three miles, in hot weather, and if they are predisposed to sickness of any kind, and are sent on board the ship in a state of excitement and worry, mortality is likely to ensue. In Quebec the animals are quietly placed on board the ship direct from the cars, and there is no discomfort of any kind to them. At the port of Quebec all the cattle I have seen loaded on board the ship were put on board during the day. A gangway was placed from the railway cars direct to the ship, and the cattle were put on board at once. At Quebec they can bring an engine down and shift the train of cars in front of the gangway just as each car of cattle is required to be loaded. In Montreal the cattle are driven down to the wharves. They may be brought down five hours before the ship is ready for them and they have got to lie on the wharves waiting shipment. They are tossed about amongst the iron on the wharves and injured by the carts passing through them, and in this injured condition they go on board the ship, when in some cases the animals are almost ready to die from the fatigue, the heat and, I believe, also from want of water.

Q. Does two hours of tide make any difference in the loading of cargo?—A. No.

By Mr. Smith :

Q. The vessel can go into the basin at Quebec and load a cargo of live cattle at once if they are ready for shipment?—A. Certainly.

Q. And they can always do it some time during the day?—A. Yes. If the vessels are ready for the cattle it is their interest to go to the inner basin at high water. They can put their cattle on board and come out next tide. There is no difficulty whatever as regards the tide in loading in the basin. If they come to the inner basin they can load their cattle on board at any time. I may mention that the "Canopus" loaded in the inner basin. She is as long a vessel as any that comes to the port and she got in there without any trouble at all. As to the accommodation afforded by Quebec for cattle in case they arrive here before the ship is ready for them, I may mention that the Harbour Commissioners intend to erect special accommodation for the animals, and that they will shortly erect sheds, so that the animals can be detained there while they are waiting for the vessels, if necessary. I believe, however, it is more to the advantage of all concerned to load the animals directly from the cars to the ship, but if it should happen that sometimes there is a delay, these sheds that the Commissioners intend to erect would provide ample accommodation for the cattle. There is lots of room here to ship all the cattle that can possibly be shipped from Quebec. The soil is dry and it is not swampy. In Montreal, in wet weather they cannot put the cattle into a great many of their yards there, because they sink up to their knees in the soft earth.

By Mr. Turner :

Q. How many vessels could be loaded with cattle in the two basins?—A. If each vessel was lying against the wall they could load about sixteen, and they would have ample accommodation there.

By Mr. Smith :

Q. You believe that Quebec has the advantage of having cool weather when it is hot in other places, and open space for the cattle without any crowding on the wharves, and that the cattle can be loaded directly on the ship here, without driving them through crowded streets?—A. Yes; certainly. There is no trouble in loading any number of cattle here and we can load them without any fatigue and suffering to the animals. It appears to me that at any port at which cattle are loaded they could have a separate wharf for themselves, so that they should not get mixed up with other cargo which goes on board ship, or that they should not get worried and over-fatigued and over-heated in being put on board. It is in my opinion to the entire interest of the Dominion of Canada that this trade should be kept in existence, and in order that the trade may be better conducted the animals should be put on board the ship in the very best possible condition. That cannot be done now in Montreal, where they drive the cattle over the streets of the city in June and July, and allow them to remain on the wharf in intensely hot weather for six or seven hours before putting them on board the ship.

Q. Of course, you know the cattle exporters say that they cannot bring the cattle down to Quebec, as it will be too expensive to pay the freight on the cars from Montreal to Quebec, and as there would be no reduction here on freight on board the steamships. They say that they have to pay the same rate on cattle from Quebec as if they were shipped from Montreal, and that they have also the additional rate of the haulage from Montreal to Quebec in the railway cars?—A. I think it is the duty of the Government, if they take into consideration the future of the trade, to make such regulations as will put the port of Quebec on such a footing that cattle men can get cheaper rates from Quebec than they can from the port of Montreal.

Q. How could the Government do that? The cattle do not belong to them, and if the exporters of cattle do not wish to bring them down to the port of Quebec, how could the Government force them to bring them down? Of course, we all understand that the cattle exporters look for the cheapest way to ship their cattle to the English market, and they say now it is cheaper to ship from Montreal than from Quebec?—A. If the railway gives a rate on cattle which is detrimental to the port of Quebec the Government should prevent that.

Q. They could not compel them to give a rate which would make a losing haulage between Montreal and Quebec?—A. Quebec is supposed to be the terminus of the Canadian Pacific Railway, and money of the country was spent on the Canadian Pacific Railway with that intention, while as it is now Montreal is the real terminus. I think the western cattle should be taken to Quebec at a short haulage rate.

Q. I do not see how the Government could help that?—A. Well, I think the Government could make such regulations that whether cattle are exported from Quebec or Montreal it should be provided that the cattle should have sufficient accommodation; and as it is at present, Quebec is the only place that can afford them that accommodation.

Q. But we have evidence that they have two large stock yards in Montreal for the accommodation of the cattle?—A. Yes; but these yards are perhaps three miles away from the ship, and as it is proven that they cannot bring the cattle down in cars, they have to drive them to the ship. That, in my opinion, does not afford sufficient accommodation for the cattle trade in Montreal.

Q. They do bring some cars down on the wharf in Montreal, but the difficulty is it appears that they have no room for a third rail, which would afford accommodation for the cattle trade. The Harbour Commissioners would be willing to supply this third rail if they had room to do so?—A. In the meantime, they have not room to do so, and the cattle are driven down in the middle of the day, exposed to intense heat, and left standing on the wharf for several hours, which, in my opinion, causes disease amongst the animals. I believe that this treatment which they receive in Montreal predisposes them to disease, and if Montreal cannot give the necessary accommodation for cattle Quebec has the accommodation ready, and the facilities afforded here can be enlarged upon.

Q. But how could you get an Act of Parliament to compel them to ship from Quebec?—A. They could compel the people interested to ship cattle in such a way as would not predispose them to disease on the voyage to England. Quebec has all the accommodation necessary for the shipment of any number of cattle.

Q. The Montreal men say that they have facilities enough and that all they want is to have a third rail for the railway cars carrying the cattle on the wharf?—A. But they cannot get that third rail in Montreal, as the accommodation on the wharf is not sufficient for it, and they should not be allowed to drive cattle three or four miles from the ship and put them directly on board, or leave them standing for three or four hours on the wharf in a heated condition without water. In my opinion, I should think that the cattle yard, where the animals are kept, should not be more than half a mile away from the ship.

Q. No doubt the facilities for shipping cattle are excellent in Quebec, but if it is more expensive to ship them from Quebec I do not see how the cattle exporters can be compelled to do what they suppose would be against their interests in shipping cattle?—A. I may state in this connection that it is not any more difficult to bring cattle down by train from Montreal than it is to bring them by steamer, and that it is altogether better to bring them down by train, as the railway cars are open, and there is always a breeze blowing through the train, which cools the cattle. All the cattle which have been shipped from here were perfectly cool, and were not overheated. They went on the ship in first-class condition, and no matter what is said as regards artificial ventilation of the steamers between here and Montreal, the natural advantages of Quebec are such that cattle are altogether better off when put on board ship here. Any artificial ventilation which they may provide on board the steamers is not half so beneficial to the animals as the good air and cool weather which they get here.

Q. The cattle exporters said they made no money last year and that some of them lost money. If it cost a few shillings a head to bring cattle down from Montreal to Quebec, of course they would be put to more expense, and it would require a very patriotic man to lose money in order to carry the trade to the port of Quebec?—A. Suppose the result of one shipment of cattle from Montreal was that

pleuro-pneumonia should be developed in the animals sent to England, it would stop the trade at once. I hold that it would be most important in such a case that animals should be shipped from Quebec, where there would be no possibility of their developing any disease.

By Mr. Turner :

Q. Do you know what is the cost of carrying cattle from Montreal to Quebec ? I think it is about \$15 a car. When the first cattle vessel was loaded with cattle at Quebec I understand the Board of Trade gave a subsidy of \$300 for five hundred head of cattle. The object of that was to make a test as to the shipment of cattle at Quebec, so as to see that the shipment could be conducted better here than at Montreal, and the subsidy given by the Board of Trade covered all the cost of the transit of the cattle between Quebec and Montreal ? A. I think if there were large numbers of cattle coming from Montreal to Quebec that the rates might be about \$10 a car, and about twenty head of cattle in the car would make about 50 cents a head. The usual rate, I understand, is from \$15 to \$18 per car.

Q. I believe that the railway companies have offered to reduce the rate ?—A. So I understand.

By Mr. Smith :

Q. Did you hear that the cargo which left here arrived in good condition ?—A. Yes; I understood they arrived in very good condition. I believe that the cattle were all delivered alive, with the exception of one or two. The cattle were put on board the steamers at Quebec in excellent condition, and they were well able to stand the voyage.

Mr. BOSWELL, the witness, files the plan of the Quebec Harbour Works issued by the Quebec Harbour Commission.

This concluded the evidence of the witness.

QUEBEC, 13th January, 1891.

On this 13th day of January, 1891, the Enquiry was resumed, Mr. Smith, Deputy Minister of Marine, presiding.

JOHN BURSTALL, Lumber Merchant, of Quebec, gives the following evidence:—

By Mr. Smith :

Q. You have been many years connected with the trade of Quebec, and you are well known as a prominent merchant in the city, Mr. Burstall ?—A. I have been thirty-five years connected with the lumber trade of Quebec.

Q. Would you please state, Mr. Burstall, anything you know in regard to the present enquiry in connection with the trade at Quebec ?—A. I may say that during the evidence yesterday there was nothing said about the shipment of cattle to England from south Quebec or Point Levis. Mr. Simons, the port warden of Quebec, who gave the evidence, said there had been some cattle shipped from here. I may state that a great many cattle have been shipped from Point Levis in years past. It was also stated yesterday, if I understood the evidence aright, that some cattle had been shipped from the inner basin here, but I think that is not a fact. All the cattle that have been shipped from Quebec were, I think, shipped from the outer basin.

(A gentleman here stated that the witness was under a wrong impression, as cattle had been shipped during the past season from the inner basin).

Mr. BURSTALL.—Well, perhaps that is so, but I was not aware of it. I may say that at south Quebec there are, on the Grand Trunk Railway premises there, sheds erected which will accommodate about a thousand head of cattle. There is also a great deal of space there owned by the Grand Trunk Railway, on which more sheds could be put up if the cattle shipments from there necessitated their erection. These

sheds at Point Levis are all covered in, but are so ventilated that there is always a perfect draft of air passing through them, which affords great comfort and splendid air for the cattle. Those sheds are only about 300 yards from where the vessels lie at the Grand Trunk Railway wharf, and the largest ship which comes to this port can lie at those wharves very easily at all times of the tide, and cattle can be brought down from the Grand Trunk Railway, discharged directly from the cars into the sheds and left there as long as the shippers may desire. They can be then walked on board the steamer, which I have said is only about 300 yards distant. Besides the accommodation at the Grand Trunk Railway wharf, there are several other wharves at south Quebec through which the Grand Trunk Railway runs, and from on which cattle can be shipped easily. The President of the Quebec Warehouse Company, who is now present in the room, can perhaps give you more information than I can as to other wharves at south Quebec, one of which is situated immediately above and the other immediately below the Grand Trunk Railway wharf. If it is so desired by the cattle shippers, the cattle can be taken alongside the steamers and put on board at once; or if it is desired to give the cattle rest, there is ample accommodation, and all of these wharves I have spoken of are within a very short distance of where the cattle would be stored. I should say the sheds for the cattle are considerably less than half a mile from either of the wharves. The Quebec Warehouse Company, which owns the two wharves to which I specially alluded, are anxious to see this business done at Point Levis. If there were any reasonable prospect of the trade increasing they would provide further accommodation for the cattle. The accommodation which is now afforded at Point Levis is quite ample, at all events, for the present. The accommodation there is much better than can be given at the port of Montreal. The cattle yards at Montreal are a long way from the shipping points, and the cattle have to be driven through the crowded streets in the heat of the day, and very often I have seen the animals lying down exhausted on the way from the yards to the steamers. This could never occur at Point Levis, because the animals could be rested in the sheds, which are near the wharves, and would have to be driven only a very short distance.

By Mr. Turner :

Q. Are you aware that there were cattle shipped from Levis last year to Montreal and transhipped from Montreal to England?—A. I am not aware of that.

Mr. TURNER.—I may say that such has been the case.

Mr. BURSTALL.—Very likely, but I have no personal knowledge of it.

Mr. TURNER.—I may say there were quite a quantity of cattle, some seventy or eighty head, sent from Levis to Montreal, and from there transhipped to England.

Mr. BURSTALL.—It seems to me to be a most insane proceeding on the part of the owners of the cattle, because they were given a longer journey by rail, and they had not the same facilities for shipping them in Montreal.

By Mr. Smith :

Q. Perhaps they were cattle that were not sold at Levis and sent up to Montreal to find a market.

Mr. TURNER.—The reason I heard was, that they had not secured space for the cattle on the vessels from here, and they thought they would have to wait a long time here before they could have them shipped to England.

Q. You were present at the Board of Trade meeting here when the question came up as regards the shipment of cattle from the port of Quebec?—A. I do not remember that I was.

Q. Well, you may have heard of the meeting having taken place. It was a meeting called specially to go into the merits of the question, as to whether cattle could be shipped from the port of Quebec profitably or not. It was stated at that meeting that a great deal, as to the cattle trade in Quebec, depended on the timber merchants here. It was stated that the timber freight was the first part of the cargo which was chartered, that cattle followed afterwards, and that if space were chartered for the cattle before the timber the trade might develop.

Mr. BURSTALL.—That might have been correct a couple of years ago, but great changes have taken place since then. Last year I know that these steamers were chartered for cattle, before they were chartered for deals. That has been more especially the case with the store cattle, which are sent to the east coast of England.

Q. Don't you consider that if the timber merchants of Quebec were to take an interest in this trade, and if the charter of the steamers would be a combined charter, both for cattle and timber, there would be a greater possibility of our securing the cattle trade for the port of Quebec?—A. That is putting the responsibility on the timber merchants, which I, as a timber merchant, do not wish to undertake.

Mr. TURNER.—I do not ask you to charter a vessel without first ascertaining that you can re-charter the space which the cattle would occupy. As you are aware, we want to secure this cattle trade for Quebec if we can, and as a Quebecker you are interested in the matter. That is the reason why I put the question to you, as one of our leading merchants, who is a large shipper from Montreal. If the combined charter for lumber vessels could be secured or carried out, it is my opinion that it would tend largely to develop the trade in Quebec?—A. I do not think the timber merchants of Quebec are acquainted with the cattle-shipping business. Such a course would put us into an entirely new branch of business.

By Mr. Smith :

Q. Would the cattle cost any more to get down to Quebec and ship from here than if they were landed in Montreal? I suppose that additional cost of haulage from Montreal to Quebec would be considerably more than if they land them at Montreal and ship them on board steamer there.

Mr. TURNER.—Probably it would cost more, but the local expenses at Quebec are greatly less than they are in Montreal, and I think in the end it would be cheaper to ship them to Quebec.

Q. You say a shipment of cattle ought to cost less from Quebec than from Montreal, if there were a proper ratio established in such cases?—A. Yes; I believe so.

Q. So that you have the additional cost of haulage from Montreal to Quebec in railway freight, but the cattle would have the advantage of being cooler and better provided for here, and they might be so much more in value on their arrival on the other side?—A. Yes. If the cattle come any distance from western Ontario the haulage from Montreal to Quebec ought not to be very much; but that, I suppose, is a question for the railway companies.

Mr. TURNER.—I may state that the cattle exporters, at the meeting which we held here, stated in the most positive way that as regards the Dominion, Allan and Beaver Lines, our chance of securing them to take cattle from Quebec was very remote. If we consider that in 1889 there were sixteen steamers laden at Quebec with wooden goods, while in 1890 there were forty vessels, you will see that it is a very large increase. Now, these vessels would afford accommodation for a very considerable quantity of cattle. We must remember that the larger the quantity of cattle shipped from here, the more the trade will become a fixture in the port of Quebec. As regards the haulage, I may state that Mr. Burstall was not here yesterday when the evidence was taken, but that it was then stated that the cost was about 50 or 60 cents per head from Montreal to Quebec. It takes them about ten hours to come down from Montreal to here on the cars, whereas on the steamers it is frequently a matter of from twelve to thirty-six hours. With the provision which we can make for cattle in the port of Quebec it would be much cheaper to ship from here than from Montreal. The accommodation for the cattle would be much cheaper here than in Montreal. I think that the 50 cents would be easily saved. It should also be remembered that we have no charges here on cattle shipped from this port. The cattle dealers with whom I have spoken have all expressed their opinion that the only difference in favour of Montreal would be the cost of haulage between Montreal and Quebec, but I think that would be comparatively nothing, when we take into consideration the advantages afforded by Quebec.

Mr. BURSTALL.—And it must be taken into consideration, also, the distance which they have to drive the cattle from the cattle sheds in Montreal to the steamer. You must remember the loss and damage to the cattle which they receive on this journey, and take into consideration also the facilities which we have in Quebec. I think it would be much cheaper for the cattle men to ship from here, taking all that into consideration.

This concluded the evidence of the witness.

Hon. H. G. JOLY DE LOTBINIÈRE, President of the Council of Agriculture of the Province of Quebec, and ex-Prime Minister of the Province of Quebec, gave the following evidence:—

By Mr. Smith:

Q. Mr. Joly, you have heard that this is an enquiry instituted by the Government for the purpose of enquiring into the cattle export trade of the Dominion. The Government, of course, is aware of the facilities afforded by Quebec for the shipment of cattle and all other goods, but this enquiry which is now being held is to place evidence on record in regard to the matter. This evidence is being collected for the purpose of being sent home to the British Government. There is at present a committee sitting in England to take evidence on the Bill presented by Mr. Plimsoll, which proposes to prohibit the importation to England of live cattle?—A. Yes; I have followed the enquiry in Montreal. Like yourself, I and others know a good deal about the business.

Mr. SMITH—Yes; we are not ignorant of the extent of the business in the exportation of live cattle between here and England, but the evidence given now will place the facts on record, just the same as if it were given before the committee sitting in England. Have you any opinion on the subject, as to the facilities afforded by Quebec for loading cattle, and as to their being superior to the facilities in Montreal, because you know that Montreal is now really the place for the shipment of cattle?—A. I cannot presume to give any information as to the correct mode of shipping cattle, but as to the convenience afforded by Quebec I certainly think it is far superior to that afforded in Montreal. There is one point to which my attention was drawn while reading the report of yesterday's meeting here, and although in any case I would have attended the enquiry here to-day, as the question is one of great importance to the farming community, in the prosperity of which it is my duty to take some interest, still, on account of the statements I have read in the newspapers I thought it still more my duty to be present to-day. One statement made before the Commission yesterday rendered it most incumbent upon me to attend this enquiry. That statement was made by Mr. Burstall and by Mr. Turner. It was as to the great mortality of cattle during their transport by steamship between Montreal and Quebec. I am very much struck by Mr. Burstall's and Mr. Turner's remarks in reference to that matter.

Mr. PRICE.—It was stated here that the Board of Trade tried to obtain statistics of the mortality in cattle between Quebec and Montreal, and that they were unsuccessful.

Mr. JOLY DE LOTBINIÈRE.—I do not wonder. The steamship lines owned in Montreal and represented by their agents in Montreal have an interest as against Quebec. I do not wonder that they refuse to give information as to the mortality of cattle between Montreal and Quebec, and that notwithstanding the fact that they have the information in their possession they refuse to give it. The mere fact that they have refused to give it, on being asked pointedly for it, shows that the companies are interested in favour of doing the trade at Montreal. After it has been reported that the mortality between Montreal and Quebec is very great, every man of common sense will conclude at once that there must be a great deal in that statement, since steamship companies have refused to give any information as to what that mortality is. They have at all events refused to contradict that statement, as they could, I suppose,

easily contradict it, by giving the exact official figures. Dwelling, as I do, on the shores of the St. Lawrence, about 40 miles above Quebec, I happen to be in a position to know something about the mortality amongst cattle on the journey from Montreal to Quebec, and if I had only been prepared in time for this information I could have obtained some estimate which (though not exactly an official statement of the losses) would have thrown some light upon this subject. I could have brought the evidence of a number of people dwelling along the shores of the St. Lawrence, which would give one an idea to a certain degree, of what that mortality is. At Point Platon I have often seen dead oxen floating in the river. I can name men who told me that every summer they have been making a great deal of money out of the carcasses of those oxen which they take from the river. The oxen thrown overboard from the steamers drift on the shore and are left there at low tide. It is well understood between the persons engaged in this business that these animals will be thrown on the beach. They take the hide and feet, and they boil the fat and make soap out of it. There are many persons who have told me that they had made a good deal out of the carcasses of the oxen which float ashore. If there were time I would have found this information out for the Commission, but I mean to do so now in any case, so as to satisfy myself, for I believe this question will come up again. I will institute some enquiries in the parishes with which I am connected, which will permit me to give figures to show the number of oxen which every summer are thrown overboard between Montreal and Quebec, and which died on that passage. I have been trying to find out how that information could be approached, if not obtained correctly. I am going to ask some of our local papers, who have got subscribers among the parishioners on the shores of the St. Lawrence, especially between Quebec and Three Rivers, to appeal to the people for such information as will enable us to have some idea of the number of dead cattle thrown overboard between Montreal and Quebec. I think that when that information is obtained the public will be astonished to find the number of cattle that died between Montreal and Quebec, and that were thrown overboard.

MR. SMITH.—Then, the fact that the cattle died and are thrown overboard is of some benefit to the people who live on the banks of the river. Of course, the insurance companies lose on the dead cattle, but there is another class of people who seem to gain considerably by it. I presume that they will all be against giving any information which would take away from them the benefit of that business.

MR. JOLY.—I know some of them, at all events, will tell me the truth, and I expect to get some information which will be useful, it not now, then by-and-bye.

Q. How much would they make out of the carcass of a large bullock. Do you think they would make \$10?—A. Oh, I think more than that. I did not make any particular enquiries as to that, because I was more struck with the number of cattle that were picked up in that way than with the exact amount which they made as the profits. It was simply in reading that statement in the papers, which I have referred to, that I mentioned it to some of my friends, and I stated to them that if I had been prepared for it I would be in a position to show myself that there was considerable mortality among the cattle shipped between Montreal and Quebec.

By Mr. Turner :

Q. Under such circumstances, you consider that the rates of insurance on cattle should be lower when they are shipped from Quebec than when they are shipped from Montreal?—A. Certainly, because the journey between Montreal and Quebec appears to be the worst part of the passage. The statement has been already made, and I make it again now, so as to emphasize it, that the steamship lines should know what that mortality is between Montreal and Quebec. They have refused to give it, and if anything which I have said, or anything which Mr. Burstall or Mr. Price has said, may be an exaggeration, it is, I think, the duty of the steamship companies to contradict it. They have got the official figures, and they can say easily what loss there is between Montreal and Quebec.

Mr. TURNER.—I understand that the steamship companies have not exactly refused to give a statement of the percentage of the total loss on the river passage, but the rule has been that upon arrival of the vessel at her destination they simply cable out the total mortality, and they do not keep a register of the number of cattle which die between Montreal and Quebec.

Mr. SMITH.—Yes; I understand that they simply keep an account of the total number of cattle lost on the voyage, and they do not keep any account in the log of the vessel as to particulars of the deaths. When I asked, "Do the cablegrams sent out here give any reason for the cause of the deaths of the animals, whether it was by suffocation on the voyage or from the heat coming down the river," they said they had no information on that subject. Sometimes in stormy weather the animals break their legs if the cleats are not properly fastened and give way under them. In that case the evidence goes to show that the animal is killed to prevent it from suffering.

By Mr. Smith:

Q. Perhaps you might express your opinion, Mr. Joly, on what the result to Canada would be if Mr. Plimsoll succeeds in prohibiting the export of live cattle from Canada to England?—A. I think the results would be deplorable.

Q. You think the consequence to Canada would be deplorable if this Bill should become law?—A. Yes; I think the consequence would be deplorable. We are making efforts at present in the Province of Quebec to improve the breed of our cattle, and I think it would be the greatest discouragement, not only to us, but to the cattle raisers in Ontario and the ranching establishments in the West, if such a trade were prohibited from Canada.

Q. Is there any reasons why the farmers of the Province of Quebec cannot follow the example of the farmers of western Ontario in raising this description of cattle, such as "stockers," and sending them from Quebec to England. Is there any reason why the farmers of Quebec should be behind the farmers of Ontario in this trade, which I understand is very remunerative?—A. When I say that the passing of this Bill will be a great loss to the farmers of the Province of Quebec I should also say that it will be a loss to them in a less degree than to the western farmers on the prairies and in Ontario, and for this reason: there is a great attempt being made now to encourage dairy farming in the Province of Quebec, and at present public and private efforts are turned in the direction of introducing dairy farming and butteries and cheese factories, etc., in the Province. It is well known that that heavy class of cattle, which is the best for butchers' meat, is not considered as the best for dairying purposes. We have recently had a public competition among the best farmers in the district of Montreal, at which thirty-four farmers competed, and in the description of their cattle, out of the entire thirty-four farmers we only found one bull which was not an Ayrshire bull. In one case we had a Holstein bull, and one Jersey and one Guernsey. It is known that this breed of cattle are much lighter than the Durham or Hereford, and that they are not so suitable for butchers' meat as the latter.

Q. It would not affect the Province of Quebec so much as it would the western farmers, on account of the efforts being made to introduce a breed of cattle which is more fitted for dairy purposes than for butchers?—A. I do not think it would affect the Province of Quebec so much as it would the Province of Ontario.

Q. I mentioned to you that evidence was given the Commission that the export of cows nearly ready for calving has been found to be very profitable and that cows and calves were always readily sold on the other side, especially if they had the calf with them.

Mr. JOLY.—I have no doubt; and a trade might be developed in that direction in the Province of Quebec. Excellent milk cows can be exported from the Province of Quebec, because the Canadian cows, so far as their milking properties are concerned, are excellent. There is such a strain of Jersey and Guernsey blood in them that it makes them really good milkers. Probably a large trade could be developed

in this breed of cows in the Province of Quebec.

This concluded the evidence of the witness.

JOSEPH ALPHONSE COUTURE, Assistant to the Chief Dominion Veterinary Inspector, and Veterinary Inspector of the Port of Quebec, gives the following evidence:—

By Mr. Smith :

Q. You have been cattle inspector at the port of Quebec for a number of years?—A. Yes; eleven years.

Q. You examined all the cattle shipped at the port of Quebec last year?—A. Yes; there were over 2,000 head shipped from Quebec last year, and I examined them all. I have been engaged in the business since 1879.

Q. You say there were 2,000 head of cattle shipped last year from Quebec?—A. Yes; but previous to that there has been no cattle to speak of shipped from here for five or six years.

Q. Where did these cattle shipped from Quebec come from?—A. They all came from Montreal.

Q. Were the cattle inspected there by Dr. McEachran, the Veterinary Inspector?—A. No; they came right through on the cars, and were examined here by myself.

Q. What was the object of these 2,000 head of cattle being sent down here for shipment?—A. Because the steamers took mostly all of their cargo on at Quebec, and cattle had to be sent here to be loaded on the steamers.

Q. Were they transient vessels which took the cattle over to England from Quebec?—A. Yes.

Q. Did the steamers go to Montreal first?—A. I cannot say, but I do not think so; I know that one steamer did not go to Montreal.

Q. They got all their cargo here?—A. Yes; but I am not in a position to say whether the vessels went to Montreal or not.

Q. Did you find the cattle in good condition when they were put on board the steamers here?—A. Yes; I found them in as good condition as cattle could possibly be in. They did not suffer from any heat on the journey from Montreal to Quebec. They did not suffer in that way at all. They were in good condition, perfectly cool, when they landed here.

Q. Were they landed at the Louise Basin?—A. Yes.

Q. And the facilities for loading them there were perfectly good?—A. Yes; the facilities for landing the cattle and loading them are very good. If there were organization here to provide for the shipment of cattle they could be loaded more easily at Quebec than at any place I know of.

Q. Did some of the cattle that were taken on the first ship loaded jump into the water?—A. No.

Q. Did they run about the streets, or anything like that?—A. No.

Q. Was there not some difficulty in loading them?—A. There was some difficulty. There was first the delay of three or four hours, through some difficulty with the ship labourers. There was some difficulty between the Ship Labourers' Society and the captain of the ship or the agent, and the loading of the cattle was delayed for three or four hours. There was such a crowd on the wharf looking on at the loading that they caused some obstruction to the loading. These were curiosity seekers, that came down to see the first cargo loaded; but the other steamers were loaded without any difficulty whatever.

Q. Had the Ship Labourers' Society anything to do with the loading of the cattle? Did they compel the captain to put some of the cattle on shore again, and then lead each of the animals in by the head?—A. No; I do not think so.

Q. Then there is nothing in those stories, in reference to this matter, which have been circulated?—A. No.

Q. In what part of the transaction did the ship labourers come in? What had they to do with the matter?—A. I do not know the nature of the trouble, but I know for a fact that the loading of the cattle was delayed for three or four hours. The captain of the vessel told me that nothing could be done in loading the cattle because the ship labourers were not satisfied.

Q. Did any delay of a similar kind occur afterwards?—A. No.

Q. If the ship labourers had been seen before the arrival of the cattle and their permission obtained could not the cattle have been loaded at once?—A. I cannot say as to that.

Q. The cattle were finally loaded in very good condition?—A. Yes; they were loaded in splendid condition.

Q. In your opinion, whether are the facilities for loading the cattle at the Quebec Basin or on the Point Levis side the better?—A. If proper accommodation for the cattle were made at the basins it would be very much easier to load them there than at Point Levis. The cattle would be nearer the steamer, and there would be no obstacle of any kind.

Q. When you refer to accommodation, do you mean the erection of sheds?—A. Yes; I mean if there were sheds here there would be more facilities for the loading of the cattle.

Q. Is it not better to bring the railway car alongside of the ship, to land them from the car direct to the steamer?—A. That cannot be done so easily in the future, especially on account of the veterinary inspection. There must be some sheds erected here on the wharf so that the veterinary inspection can be carried on thoroughly and with greater facility. If we had cattle sheds erected at the Quebec wharves no port in the world could afford better facilities than we have here.

Q. That is all the port of Quebec needs?—A. Well, that is principally what it needs. But all these improvements can be attended to with very little expense if we get the trade here.

Q. If you had a place to put the cattle into, such as a stock yard, they would not require to be rested here before they were shipped?—A. Oh, no; they would merely require to be landed, in order to undergo inspection.

Q. They could be taken on board the vessel immediately after inspection?—A. Yes; they could be put on board the vessel immediately.

Q. There would be no other delay, that you know of?—A. There could be no other delay, because in my opinion the facilities are better on the Quebec side than at Point Levis.

Q. How long would it take you to inspect, say, a cargo of 400 cattle?—A. It would take, I should say, about one hour.

Q. You do not inspect each animal individually?—A. We do not make an individual inspection of the cattle. We examine them in small lots of perhaps a dozen at a time; but for persons in our profession, who have practice and experience in making these examinations, it is very easy for us at the first glance to tell whether an animal is fit to be shipped or not. If the animal is seen to be looking dull, or looking fatigued, it is taken apart and examined individually and especially.

Q. You are acquainted with the mode of shipment of cattle in Montreal?—A. Yes; I am acquainted with the mode of shipment of cattle in Montreal.

Q. Whether do you say it is better that cattle should be shipped at the port of Quebec or at Montreal?—A. As far as the health of the cattle is concerned, there is not the slightest doubt that Quebec is a good deal better than Montreal. The loading is done here without any undue fatigue to the animals.

By Mr. Turner:

Q. Would you kindly state what is the character of the cattle raised in the Eastern Townships of the Province of Quebec, and whether they are suitable for shipment to England?—A. Yes; the cattle raised in the Eastern Townships are suitable for export, and the fact is, a good many cattle are exported from there now; but

they are sent to Montreal for shipment to England. They could be brought to Quebec for shipment, as well, if not better, if the railway lines would carry them at reasonable figures. If they got transportation from the Eastern Townships to Quebec as cheaply as they are carried to Montreal I do not see why they should not be brought here. We had cattle from the Eastern Townships shipped at Quebec. In 1881 I have seen a good many small lots of cattle shipped from Lennoxville and Compton through the port of Quebec.

By Mr. Smith:

Q. Do you know if the cattle raised in the neighbourhood of Quebec are fit for shipment to England?—A. As the Honourable Mr. Joly stated, it is mostly dairy cattle that are raised here, but in the Eastern Townships it is mostly beef cattle.

By Mr. Price:

Q. Does not the law require that the Veterinary Inspector should inspect the cattle and give his certificate as to their health before they are placed on board?

MR. SMITH.—Yes; and the Veterinary Inspector has to take the responsibility if he signs a certificate that the cattle are free from disease and if they should be found afterwards to be suffering from disease, he takes the responsibility for that.

DR. COUTURE.—When I say the cattle are inspected in lots of twelve, I should explain: The cattle are taken in small lots from the railway cars, and each lot is put together on being taken out. We examine the cattle superficially. We look at them carefully, and, as I say, a veterinary surgeon practised in the business can say at once whether there is an animal that looks dull or sickly. If we find such an animal in the lot we take him out, and then make a special examination of it. These are the instructions that have been given us by the authorities.

By Mr. Turner:

Q. With reference to the delay caused as to the difficulty between the ship labourers and the vessel, was that difficulty not in consequence of the cattle men coming to Quebec by the Richelieu Company's steamer and arriving here to load the cattle. The cattle had arrived in the morning, before the cattle men had arrived to see that the animals were properly placed on board?—A. I understand the delay was caused by the delay of the arrival of the cattle men. That was the first cause of delay, but there were several causes of delay that day. I was told by the captain that there had been some difficulty with the ship labourers, and then there was the difficulty of contending against all the large crowd of people who were looking at the cattle being shipped.

Q. Are you aware that the Harbour Commissioners propose making the necessary sheds and buildings and enclosures for the cattle at Quebec?—A. Yes; I know they propose doing that, and I think it is further proposed, either by the Harbour Commissioners or by a company, to give the cattle trade all the facilities necessary to make the St. Louis dock the best place to ship the cattle from. I repeat again that it would not take a very large sum of money to make all the facilities necessary to that effect. Last fall I had several conversations with cattle shippers on the question as to the organization of a company to give the cattle trade all the accommodation necessary.

By Mr. Smith:

Q. Do you see anything which would prevent cattle being as profitably shipped at Quebec as in Montreal?—A. No; I do not see anything at all, and it would be considerably more healthy to the animals, and they would incur less fatigue if they were shipped from Quebec. The charge on the railway cars is only about 50 cents per head from Quebec to Montreal, but this is counterbalanced by other advantages which cattle shippers have at this port, because the cost of feeding the cattle here would be much cheaper.

Q. And perhaps there would be less insurance?—A. Well, I do not say as to that.

Q. But if the cattle trade became an established business here and the risk of mortality between Quebec and Montreal were avoided, I presume the insurance men would reduce the rates, if the risk was less?—A. I am not prepared to say as to a reduced rate of insurance, but it would certainly cost less to keep the cattle here while they are waiting for the steamer. At Montreal they have to feed the cattle from twenty-four hours to seventy-two hours. The hay costs them \$18 a ton, and grain feeding is also very high, and coming here the cattle can be loaded almost immediately after they have been inspected by the veterinary surgeon, and that would compensate for the 50 cents per head extra haulage from Montreal.

Q. It appears, however, that there is great difficulty to overcome in getting the trade introduced here. The cattle shippers are not familiar with the trade from the port of Quebec, and their object is to get the cattle shipped as quickly as possible. They do not care to make the venture of going into a new line of business by shipping from here?—A. I know for a fact from conversations that I have had that cattle shippers would ship from Quebec in preference to shipping from Montreal if the lumber dealers would only consent to arrange on the vessels for the shipping from Quebec. While speaking to those cattle shippers they told me, "We are ready to take stock in a company organized to ship cattle from Quebec as soon as your lumber merchants shall ship from Quebec."

Q. Do the lumber merchants not ship from Quebec?—A. I do not know, but that is what the cattle shippers told me.

Q. I thought that the lumber merchants all shipped from Quebec?—I understand that there was a considerable quantity of Ottawa deals shipped from Montreal last year.

Q. So that the timber merchants have a good deal to say in the matter?—A. Yes; I think they have.

By Mr. Turner :

Q. It is only within the last few years that shipments of lumber have been made from Montreal. Eight or ten years ago the Ottawa lumber was all shipped from Quebec, and I think the lumber merchants will corroborate me in that respect?—A. (By Dr. Couture, Witness). In talking with Mr. Bickerdike and Mr. Thompson, cattle exporters, whom I was trying to induce to take shares in the company I was organizing, they said, "We are ready at once to subscribe a few thousand dollars each, but you must try to induce your lumber men to help us."

Q. And unless they could get vessels carrying lumber from here to arrange for space for the cattle they could not carry on the business?—A. They could carry on the business in a certain way from Quebec, but they would not ship as many cattle as if the lumber men co-operated in the business. Knowing the facilities they have at this port, cattle shippers are ready to ship cattle from Quebec if they have good steamers.

Q. I suppose there are plenty of transient boats coming here, but they cannot get the regular liners to stop?—A. I think there would be some difficulty in getting the regular liners to stop here. I heard it stated at the enquiry yesterday that in shipping dairy cows there was a fear that they would suffer on the voyage. In my opinion, there certainly is no danger to dairy cows or cows in calf suffering. We have received at quarantine station here from England many thousand of the highest class of most expensive cows in calf, and ninety-nine times out of a hundred the cows and the calves are in perfect condition.

Q. They have their calves on the way over, and they do not suffer anything?—A. They did not suffer at all, even when the passage was very stormy. Surely, if Englishmen can send their cows in calf over here in good order we should similarly be able to send them our stock in good condition.

By Mr. H. M. Price :

Q. I would ask Dr. Couture if Mr. Bickerdike and Mr. Cunningham, cattle exporters, have not called his attention to the exceptionally favourable position of the

Louise Basin for the shipment of cattle. Have they not pointed out that the weather was cooler here than at any other point in the river, and that there is always a breeze blowing here which cools the cattle. I know that Mr. Bickerdike called my attention to the fact on the embankment one day?—A. I am aware that this has been the subject of remark frequently. We have spoken of the matter to the cattle dealers very frequently, especially since they have commenced to ship cattle from Quebec. This matter has impressed them very much. Many of the cattle exporters have told me that they could not find a better place in the world from which to ship cattle than from Quebec.

Q. You say that the temperature here is lower than at other places, and that there is always a breeze blowing which cools the cattle?—A. Yes; the temperature is lower and it is cooler here. The breeze frequently blows so strong here that we have difficulty in keeping on our hats at the dock.

This concluded the evidence of the witness.

WILLIAM B. HALL, of the City of Quebec, Veterinary Surgeon to the Royal Canadian Artillery, gave the following evidence:—

By Mr. Smith :

Q. Have you given any attention to this subject of the cattle export trade, Mr. Hall?—A. Yes, sir; last summer I was asked by the president and members of the Board of Trade to give my opinion as to the facilities for the shipment of cattle from the Louise Embankment, and I did so. I examined the place carefully, and I found that there could not be a more suitable place in the Dominion for the shipment of cattle. I also found that should cattle be sick or indisposed when they arrived here the facilities for their recuperation were so excellent, the place being near to the Beauport Flats, where there is abundance of rich pasturage; the cattle could remain there for a short time and start on their voyage in a strong and healthy condition.

Q. You have been in Montreal and seen the shipment of cattle there?—A. Yes; I have.

Q. And you think that Quebec is much superior to Montreal as a place of shipment for cattle?—A. Yes; it is much superior.

Q. And there is more comfort for the animals here?—A. Yes; as regards the comfort and health of the animals, and their accommodation in every way, Quebec is far superior to Montreal. The mortality amongst the cattle between Montreal and Quebec would be avoided if they were shipped from here.

Q. You think there would be no mortality if the cattle were shipped from Quebec, and brought down in the cars from Montreal to Quebec?—A. There would be comparatively none, because the cars are always open, and there is always a breeze blowing through them, and the cattle have plenty of fresh air.

By Mr. Turner :

Q. Would you state your opinion as to whether it would be profitable to ship, not only fat cattle, but the smaller cattle, called "stockers," from Quebec?—A. There is a class of cattle which comes to this market from the surrounding townships, and in my opinion they are quite suitable for shipment.

Q. They would be "stockers"?—A. Yes.

Q. Are there plenty of such animals for shipment?—A. Yes; there are plenty of Short Horns here.

Q. Do you think if there were purchasers for the cattle here they could buy a cargo for shipment from the surrounding neighbourhood?—A. Yes; cattle have been shipped here which came from the surrounding country. Messrs. Towzer & Co. shipped several cargoes of them to the old country. They were the same class of cattle as are raised in the Eastern Townships. They are a hardy class of cattle, and

were adapted for being purchased by the farmers in old country and being fattened for beef.

By Mr. Smith :

Q. Do you think there would be any opportunity for exporting dressed beef from the port of Quebec?—A. No; there is not the proper quality of cattle raised here for the English meat market.

Q. What class of cattle do they raise in the Lake St. John district?—A. I think the cattle are small there.

Q. Are you aware that cattle from the Lake St. John district are sent to Montreal and transhipped from Montreal to England?—A. That may be the case but I am not aware of it. I may say that cattle that come from any distance on the north shore are much inferior in quality for killing purposes to those that are raised on the south shore.

This concluded the evidence of the witness.

LOUIS MORIN, of the City of Quebec, Pilot between Quebec and Father Point, gave the following evidence :

By Mr. Smith :

Q. Upon what point do you wish to give your opinion in connection with this matter, Mr. Morin? Have you taken cattle ships down the river?—A. Yes, sir; I have been employed for seven years on the Allan Line and for two years on the Hansa Line, which ships all carry cattle.

Q. Did you find the cattle were well taken care of on board ship?—A. Yes; they were well taken care of.

Q. Do you think that the carrying of live cattle on the upper deck would interfere with the working of the ship in stormy weather?—A. It does not interfere with our work as pilots. You asked me whether they were well taken care of. I found them sometimes, perhaps, too well taken care of, for the men go amongst them two or three times every night with lanterns, and that, to a small extent, sometimes interferes with the seeing ahead of the ship.

Q. But that is all in favour of the good care taken of the cattle?—A. Yes; the men are constantly amongst the cattle, attending to them, seeing to their comfort, and making sure that they are well fed and well watered.

Q. Did you ever see any cattle die between Quebec and Bic, or Father Point?—A. Very few have died between these two points, but those that did die were sick before they went on board, as I had been informed by the crews.

Q. You never saw a ship top heavy on account of a deck load of cattle?—A. No; not on any of the ships I have been on.

Q. The ships are all well loaded, and you have never had any loss because of their being badly laden?—A. Yes; they are well loaded and never had any loss.

Q. Do the ships carry steam fans to give the cattle ventilation between here and Father Point?—A. No; not generally; they did not need steam fans down to Father Point.

Q. Did they use the fans going down the river and then put them on shore at Father Point?—A. I believe that has been done, but I have never seen it done. I believe they land the fans at Quebec or Rimouski and put them on a steamer bound up again. On the Hansa Line, which I am connected with now, they have fixed steam fans.

Q. Do you know of any other line of steamers carrying fixed steam fans?—A. No; the steam fans have been recently introduced on the Hansa boats.

Q. Did you ever hear that the Hansa Line was very successful in their transportation of cattle?—A. I have been two years on the Hansa Line, and during that time I have only seen them throw one animal overboard. That animal died coming down from Montreal.

Q. Did they seem to take great care of the cattle on that line?—A. They are very careful about the cattle. The officers of the ship, as well as the cattle men themselves, go through the animals and take a great interest in their welfare.

Q. Did you ever hear if the cattle men who go across taking care of the cattle complain of the treatment they receive on board of the vessels of that line?—A. No; I think they are all very well satisfied.

This concluded the evidence of the witness.

FRANÇOIS XAVIER LAMARRE, Pilot between Quebec and Father Point, gave the following evidence:—

By Mr. Smith :

I have been pilot of the Ross and Donaldson Line of steamers during eight years, during which time the boats of those lines carried cargoes of live cattle.

Q. Did you notice how the cattle are taken care of on board those steamers?—A. Yes; the cattle are very well taken care of. I remember, however, one steamer, called the "Viking," lost twenty-two head of cattle between Montreal and Quebec on account of the intense heat. It was on a warm day, about the middle of July. There were 500 or 600 head of cattle left Montreal nearly dead from the heat, but when they got below Quebec they began to revive again in the cool air, and in a short time were in excellent condition.

Q. I suppose extreme heat is a most dangerous thing for the animals?—A. Yes, sir; that is what kills them. I heard the cattle men say that the tallow inside their bodies melted with the heat and killed them.

Q. What do they do with the cattle which died?—A. They throw them overboard between Montreal and Father Point.

Q. As soon as they die they throw them in the river?—A. Yes; and the animals floated in the water and drifted ashore, or were picked up by boats.

Q. You heard, I suppose, that that is quite a source of revenue to the inhabitants along the river, who pick up these cattle and make money out of them?—A. There is a man used to go to the pilot office and wanted the pilots to blow the whistle for him when they threw any cattle overboard. He said: "If you will blow the whistle I will give you so much for doing so."

Q. You think it is the heat on the journey between Montreal and Quebec that is the most dangerous thing for the cattle?—A. Yes; that is the most dangerous thing, and it is on that journey that they take their sickness. I have some experience in the business now, as I have been a long time on the boats. But it was especially in the steamer "Viking" that I noticed this most.

Q. You think that if the cattle were loaded at Quebec this mortality would not occur?—A. If the cattle were loaded at Quebec I think they would have been saved in this case.

This concluded the evidence of the witness.

E. T. NESBITT, of the City of Quebec, Lumber Merchant and Builder, gave the following evidence:—

By Mr. Smith :

Q. Did you ever fit up any stalls on board vessels at Quebec for cattle?—A. I supplied lumber for them.

Q. What kind of lumber did you supply?—A. Pine and spruce. They were 1½-inch and 2-inch boards.

Q. What were the 2-inch boards for?—A. For the rails, the studding and the uprights. The floor of the deck was 1-inch boards laid on 2-inch studding.

Q. Was that strong enough to hold the cleats, because evidence has been given that there is great danger of the cleats breaking away, in which case the cattle

break their legs?—A. The cleats could not break if they are well nailed. This part of the work is done in spruce, and the nails have a great grip in spruce.

Q. What size stalls were erected on board the steamers here? What space was allowed for each large animal?—Two feet six inches are allowed here for each animal.

Q. Did you ever fit up stalls for cattle on the hatches?—A. I believe there were some stalls fitted up on the hatches of some of the ships.

Q. But not in all the ships?—A. No; not in all the ships.

Q. What size were the uprights on the upper deck?—A. The posts were 3 feet 6 inches.

Q. Do you think that would be strong enough to stand storms?—A. Yes, sir.

Q. I suppose you know that some of those stalls are washed away, just like paste-board?—A. Yes, sir; but if an extra heavy sea comes it will wash away even iron stanchions. I would suggest that on the roof of these stalls there should be two single inch boards laid close over each other, so as to make them water-tight. If there were two single inch boards it would be better than one 2-inch board, because the two 1-inch boards would make a tighter deck and would be safer for the crew to walk on.

Q. Did you fit up the steamer "Linda" or the steamer "Straits of Magellan" when they were in port here?—A. No, sir.

Q. You know that these vessels lost a large number of cattle?—A. Yes; I have heard so.

Q. What do you put in the sides of the cattle stalls on deck?—A. Inch boards.

Q. Would 2-inch boards not be better, so as to keep the wet from the cattle?—A. No; I do not think so. But I think it would be better to have something over the joint, because you will have the opening at the joint, no matter what the size of the boards are. Two single 1-inch boards lapped to cover the joints and making them water-tight would be a good thing.

Q. I suppose you consider that in the fall of the year it is bad for the cattle that they should get wet?—A. Yes, sir; the salt water is very bad indeed, especially if in cold weather it cannot be dried.

Q. What do you think of the upper deck being fitted with angle-iron frames, so that they could take off the boards and planking when they were not using them?—A. My opinion is that when a vessel gets into a gale of wind and ships seas on board which would knock away these wooden fittings it will knock away angle-iron frames just as well. We have an instance of that in the case of the "Vancouver," when her decks were swept, and Captain Lindell and the Quartermaster drowned.

Q. But it is the opinion of a great many witnesses who have given their evidence before this Commission that the cattle houses now built on the upper decks of these steamers are not sufficiently strong, and that it would be a great deal better if they had two single inch planks and angle-iron frames. It is said that would be better than the present custom of putting posts on board the ship?—A. There is no doubt that the angle-iron frames would be stronger for the moment, but if a heavy sea came along no angle-iron would resist it. The animals are protected already by the high bulwarks of the vessel, and it is only the spray which comes on board the ship that injures the cattle.

Q. You think the cattle houses now built on board the ships are strong enough?—A. Yes; with the additions I have stated, namely, that they should be fitted up with two single inch boards.

Q. And at present most of them use only a single 1-inch board?—A. Yes, sir.

Q. So that in heavy weather you have no doubt that the cattle run a considerable risk of being washed overboard?—A. Yes, sir; and it seems to me that if the captain of a cattle ship knew his business he would put his vessel's head to the sea and nurse her during the storm. If he nurses the ship he will nurse the cattle also, and his doing so will not only save the cattle, but the fittings on board the ship as well. It would be necessary for a captain to do this, even though he had angle-iron frames on board.

Q. We have had in evidence that a great deal depends on the captain of the ship carrying cattle. If he nurses his vessel during a heavy sea, until the storm abates, he will do a great deal to save his cargo, although he may not make any headway?—A. Yes; that is the fact. I would like to make a few suggestions about what I know of cattle ships which loaded here last summer. I watched the experiment of shipping cattle from here to England very closely. I noticed that the cattle were walked quietly from the railway cars on to the deck of the vessel, which was only about 30 feet distance, and the animals were at all times nice and cool.

Q. But that was not the case with one cargo. It is stated that in one case delay was caused on account of some difficulty with the Ship Labourers' Association?—A. There was some delay, I understand, in one shipment, but when they commenced taking the cattle on board the ship the work was done in quick time, without any discomfort of the cattle. There was a delay before they started putting the animals on board, but when they did commence putting them on board it only took three or four hours.

Q. There was no harshness to the cattle?—A. No harshness whatever. The fodder and the hay were rolled straight from the cars to the ship without any trouble or expense. Even in the hottest weather it is always cool on the embankment after 4 o'clock p.m. I think that Eastern Townships cattle could be shipped direct from Quebec at less cost and with much less hardship to the animals than they can be shipped from Montreal. There were about sixteen ships loaded in the port of Quebec in 1888 as against forty ships in 1889, and this shows the steamship business is generally on the increase here for the accommodation of the timber trade. With the co-operation of the timber and deal shippers here, I think that great facilities might be offered to the cattle trade. The western exporters told me here last year that the only difficulty in getting the trade to Quebec was the securing of space on board the vessels, and that if cattle space was arranged for they could give us all the cattle we could take. Space on steamers is always at a premium in Montreal, and the trade is increasing there. If space on steamers were offered to shippers of cattle on vessels leaving this port the difference of 50 cents a head railway freight between Montreal and Quebec would not amount to much. In fact, the railway freight would be nothing, if you take into consideration the extra cost of feeding the cattle in Montreal and the two or three days' delay in the stock yards awaiting the ships. It would be much dearer to hold the cattle in Montreal than to ship them *via* Quebec. I may say that the cost of fitting up cattle vessels is much cheaper in Quebec than in Montreal. The labour in that particular line is cheaper here, and the lumber is cheaper also. I could put the fittings on board the steamers here at 15 per cent. less than in Montreal.

By Mr. Turner :

Q. Would you take a contract to fit up steamers here at 15 per cent. less than they do it in Montreal?—A. Yes; I would take such a contract for the whole season.

Q. Do you think any disadvantage would arise from any opposition by the Ship Labourers' Society if cattle were shipped from here?—A. No, sir; I do not think there would be any difficulty from that cause whatever. I think they would understand the position when the matter is explained to them. Cattle are perishable freight, and they have to be handled without delay.

Q. Do you know if the Montreal shippers are afraid of the Ship Labourers' Association at Quebec?—A. I think not. The Ship Labourers' Society here is in favour of the cattle shippers of Montreal, and they are anxious to get the trade here.

Q. And do you think they would assist them?—A. They do assist them now, in my opinion.

Q. Do you think the Ship Labourers' Society would interfere to prevent or to thwart the cattle shippers if they shipped from Quebec?—A. I do not think that the ship labourers would be such fools as to do that.

Mr. TURNER.—I may state that the ship labourers are very anxious that the cattle trade should be developed at Quebec, and that no obstacle should be put in the

way of carrying it out. I trust that an opportunity will be afforded the ship labourers to contradict any impression which might possibly exist in this respect. I should like to have it from one of themselves that they are anxious to see the trade here.

Mr. NESBITT.—The cost of shipping cattle at Quebec would soon be lowered, on account of the saving which could be made by a ship loading here. She has three days in port less than if she made the journey to Montreal. She saves the expense of her pilot and coal, &c. If we can establish what percentage of cattle are lost between Montreal and Quebec and how many die after passing Quebec from the effects of suffocation, it would, I think, show the underwriters that they could give a less rate for cattle shipped from Quebec than from Montreal. If the cattle shippers get a long haulage of cattle from the west to Quebec the difference between taking them to Montreal or Quebec would be very little indeed. They can bring their cattle here on cars about 50 feet from the ship's side and put them on board in a fresh condition at a moment's notice. I am glad to hear that the Harbour Commissioners intend to build the sheds to accommodate the cattle trade here, and it will greatly facilitate matters. It would be a great thing if the western shippers of cattle were made aware of this fact early in the season, so that they could take advantage of it. I have heard of ships having cattle on board stopping here to complete their cargo with deals, and they had to go twenty-five miles below Quebec, and return here to recuperate their cattle.

This concluded the evidence of the witness.

Honourable Colonel WILLIAM RHODES, late Minister of Agriculture for the Province of Quebec, gave the following evidence:—

By Mr. Smith :

Q. Colonel Rhodes, you have large experience in the agricultural matters of the Province, and you also have experience with regard to raising stock, and so on? —A. I have considerable experience with regard to cattle, acquired during the last forty years, and culminating in my being appointed Commissioner of Agriculture of the Province of Quebec. I am of opinion that in and about the harbour of Quebec it would be difficult to find better accommodation for the shipment of cattle than it affords to day. There are two sides to this harbour, which creates competition of a very healthy character. If cattle can be shipped in one place better than in another, the better place will get the advantage and the others will have to prepare for the competition. A great deal of the trouble which we have here arises from various causes, which are very easily corrected. Let us take the question of the shipment of cattle. The shipping of cattle is now done by a number of inexperienced men, who have had no training in this special business. The kind of training that I refer to is the training that you see in the cattle yards of Chicago. In Chicago they have different kinds of ways of removing cattle to various places, some of which are exceedingly simple and all of which make it easier for the cattle to be handled. For instance, in Chicago they have got one old ox which they call "Old Tom," and "Old Tom" is invaluable. He will ship any amount of cattle himself without doing them any injury whatever. The animals are brought to the point from which they are taken into the lairs, and "Old Tom" comes along and leads them into the place where they are required, and leaves them there; it is wonderful to see how he gets his comrades to follow him. I saw some cattle loaded here last fall, and it seems to me as if the business were carried on with the idea of stampeding the cattle and scaring them. If there were a company here, or some such association as has been referred to, which would adopt these easy ways of shipping cattle, without exercising force or the using of sticks, the whole thing would be very much better. It is the nature of an animal to follow his leader. All these animals that I have seen shipped at Montreal and from this port could have been shipped much more easily if the shippers possessed a little more knowledge and a little more experience in the business. For instance, there was difficulty experienced

here in getting the cattle out of the car, whereas if they had "Old Tom" here he would have gathered them to any part of the ship where they were wanted to be placed, and the animals would not be belaboured with sticks. Then there is another thing with cattle: they are very sensitive to noise, and excessively nervous, and shouting and "God-damning" them, or anything of that kind, is very irritating to the animal. Of course, it is not the particular word that is used that annoys them, but it is the sound of the voice and the way in which it is said. Generally, they regard the sound of the voice at present as the sound of a savage beast amongst them which has come to irritate them. I have heard, since I came to the room, that the cattle attendants were alleged to be taken from a class of broken down men, who must necessarily be sea-sick in the earlier part of the voyage to England, and in consequence totally unfit to take care of the cattle. Further, the cattle after they have got down to the Gulf find themselves without any attendants. We also hear, again, that when cattle get loose at night it is unsafe for a man's life to go amongst them for fear he will be killed by his own cattle. Now, the whole subject is so voluminous that it would take me a long time to give evidence upon it.

Q. That is one of the reasons that the underwriters suggest that the ship should be fitted with the electric light?—A. Yes; I suppose the electric light would be a good thing. I myself brought a horse once from Paris to London and from London to Quebec, and I saved that horse's life several times on the voyage by showing kindness to him. I went to him and put my breath to his nostrils and coaxed him, and it is that sympathy with an animal that saves him from doing an injury to himself. It is the same way with cattle. If they are well treated by intelligent men in the business they will be carried safely, and if the care of them is not left to those broken down clergymen, and others.

By Mr. Smith :

Q. We could only hear of a few instances of that kind. But a clergyman, if he is willing to work and was not sea-sick, ought to be a very good and kind man to the cattle?—A. I suppose he would do the cattle a good deal of good if he were not sea-sick.

Q. Your opinion is, that Quebec possesses great advantages as a port of shipment for cattle?—A. There is no doubt whatever about that. You have twenty miles of wharf in the port of Quebec, and the weather is always cool and the temperature good for cattle. There is no doubt Quebec has enormous advantages. But we have been deprived of this trade because certain persons have greater personal interests elsewhere. A ship-owner, if he goes to Montreal, gets a certificate free, whereas if he comes here he has to pay for it.

MR. TURNER.—The Harbour Commissioners have now practically made the port here free for cattle?

Colonel RHODES.—I suppose so. I am chairman of a warehousing company here, and we understand that the Harbour Commissioners charge a less rate than we do. If we come down to the Harbour Commissioners' rate, they establish a rate below us again. If we charge \$60 a shed the Commissioners will charge \$40.

By Mr. Turner :

Q. I want to show that here in Quebec the Harbour Commissioners have waived all charges on cattle shipments, and that they still continue to do so. The charge upon any vessel loading cattle at any of their wharves is consequently free?—A. I was not aware of that.

Colonel FORSYTHE, Member of the Harbour Commission of Quebec.—That is a fact.

Colonel RHODES.—I have exported oxen to Glasgow, and we had to take them to Montreal to get them insured, and ship them from Montreal to Glasgow. I could not get them insured at Quebec.

Q. How many years is that ago?—A. Seven years. I believe that many cattle are now sent from Quebec to Montreal and shipped there.

Mr. TURNER.—There were 2,000 cattle shipped from Quebec last season?—A. Yes; and some years ago we shipped from Point Levis.

By Mr. Smith:

Q. That was before the regular trade began?—A. No; the regular trade was going on then. The shipment from Point Levis arose from the fact that the Grand Trunk Railway erected accommodation there for the shipment of cattle. That trade from Point Levis was killed by making that portion of the harbour a quarantine station. You could not ship from the same wharf clean and unclean cattle. Those ships that came across the ocean landed their cattle at the wharf station, and they had to be driven from the wharf a considerable distance to the quarantine station, where they remained for three months. As soon as the animals were landed on the wharf they emptied themselves. This refuse was carried away and distributed in every direction, and it would not do to ship clean animals from the same spot as the unclean animals landed.

Q. Is there still the same objection to shipping cattle from Point Levis?—A. Yes; I made all the resistance I could to the establishment of the quarantine station at the port of Quebec, but the Government of the day took another view. They forced the quarantine station on the port of Quebec, when it ought to be situated on some island in the neighbourhood of Grosse Ile. In such a case, if the disease got out of the quarantine station it would have got on to the island and not the mainland. Here we have got the disease out of the quarantine station and the Government had to pay \$100,000 to prevent its spreading.

Q. That was the case with diseased cattle imported from England?—A. No; they went to a worse place than England to get their cattle. They went to Hamburg, and brought cattle from the very headquarters of the disease. They imported them to Quebec, landed them at the wharf and had to kill every animal in the quarantine.

Q. How many years ago is that?—A. Seven or eight years.

Q. How did they dispose of the dead animals?—A. They calcined them and burnt them. Previous to that they actually gave away this cattle manure and distributed it all over the country. It is a miracle there was not more disease all over the country.

Q. But they have not done that recently?—A. Oh, yes; I think so. In similar cases in Liverpool, England, the manure is taken to the centre of the channel and thrown overboard. Here that could not be done, because the manure would float and would drift on to the land, and the thing would just be as bad as ever.

This concluded the evidence of the witness.

JOSEPH ADOLPHE COUTURE, Veterinary Inspector for the port of Quebec, and assistant to the Chief Veterinary Inspector for the Dominion of Canada, was recalled by Mr. Turner, President of the Board of Trade, after the evidence given by the Hon. Mr. Rhodes, the witness immediately preceding. He gave the following evidence:—

By Mr. Smith:

Q. Colonel Rhodes gave his testimony that he was afraid that sometimes the manure from the quarantine station would be given out to the country farmers and used as manure on their lands, and in such a case he was afraid that there might be a danger of infection to cattle in the neighbourhood. Can you tell us what is done with the manure of the animals imported into quarantine station here?—A. I perhaps may as well tell you the entire proceedings in connection with the quarantine station here. I may say, first, that the utmost precautions are taken, and have always been taken, to prevent the spread of disease in this country. All cattle which

arrive from foreign countries to this port are suspected of suffering from the disease. That is the principle we go on, and we take our precautions accordingly. The cattle imported from England and elsewhere have always been treated from the first moment of their arrival at port as diseased cattle, and during their term in quarantine, which lasts from three to four months, every precaution is taken as regards them. It is only when they are left the specified time in the quarantine, and when it has been proven to a certainty that they do not suffer from disease, that they are treated as sound cattle.

Q. That is to say, that all precautions that can be taken to prevent contagion amongst cattle being introduced into this country have been taken at the quarantine station?—A. Certainly. We take all precautions that possibly can be thought of or suggested from the most expert sources. For instance, immediately the cattle have been landed at the wharf for quarantine, no matter whether they be diseased or not, we treat them as diseased cattle. After they are driven to the quarantine the roads along which they pass, the wharf itself, and every thing they touch, is thoroughly swept and afterwards sprinkled with lime and other disinfectants. The excreta has always been carried off the wharves and on the road going to the quarantine. These places have been disinfected thoroughly. The refuse is carried to the quarantine, and every precaution taken to prevent any Canadian cattle passing on those roads, before they were thoroughly disinfected. After the cattle are admitted to the quarantine every lot imported is kept by itself, and cannot have any contact whatever with another lot. The cattle of the country cannot by any means take any contagion nor can separate lots imported into quarantine take contagion from other lots which might possibly be diseased. Between each lot of cattle kept in the quarantine there is a double fence, with a space of between 30 to 60 feet, and sometimes 200 feet, separating them. The yards are cleaned every day and the manure is sent into one of the corners of the quarantine and thoroughly disinfected, just as if the cattle were diseased, although in every case for the last few years there has been no disease found.

Q. Was the manure disinfected when put into this corner of the quarantine that you speak of?—A. No; not when the cattle did not show disease during their stay in the quarantine. There was no necessity for specially disinfecting it under the circumstances, and for this reason: when any manure was permitted to leave the quarantine it was ascertained first that the cattle were perfectly sound. This manure was sold during the winter when the quarantine was closed. We kept it perhaps for two or three seasons. It was thoroughly frozen through during those three seasons, and there could be no possibility of infection, as in addition to the fact that it was frozen, it was proven to the satisfaction of everybody that the cattle had no disease when they left the quarantine. The manure was disposed of only a long time after the cattle left the quarantine. When pleuro-pneumonia or foot and mouth disease was imported from England to Canada the droppings have always been burnt. They were not only disinfected but they were burnt, and anything that had any contact with these diseased cattle was burnt also, notwithstanding that this was the cause of enormous expense to the country. When pleuro-pneumonia was imported in 1885 the droppings from the cattle stables, the fodder which remained, implements of all kinds used in connection with the animals, the clothes of the men who had contact with them, the halters on the animals, the ropes, and everything with which they came in contact or was suspected to have been in contact with the diseased animals, was burnt. The Government paid all the expenses, even to the cost of the men's clothes. The cattle which remained in the quarantine afterwards were kept there nine months in addition to the three months which they spent in quarantine, and the feeding of these animals and their care was paid for by the Government. The cattle in the quarantine have no contact whatever with the cattle of the country. The quarantine station is enclosed by a board fence 6 feet high, and there was a double fence inside of that, with a space of from 30 to 200 feet between each fence, which makes the quarantine station perfectly isolated.

By Mr. Smith :

Q. So that your evidence is, that any manure which was sold to the farmers from the quarantine station could not by any possible means carry infection?—A. Yes; that is my evidence. Any manure which was sold to the farmers could not by any human possibility spread infection.

Q. Of course, an outside person, not knowing all these details and the precautions which you take to prevent infection, would suppose if the farmer bought so many loads of manure from the station it was the manure from the cattle infected. They would not know that the manure from healthy cattle was kept for a long time, and only sold in winter, and that all manure from infected animals was destroyed?—A. Yes; I suppose that would naturally be the case unless a person made enquiries as to the precautions taken. I may add that not only has no manure been sold from infected cattle, but even that should it have been sold, as we keep it for fifteen months and sometimes two years, after being thoroughly frozen twice there would be no danger of contagion. That fact is admitted by the best veterinary authorities in Canada and in England.

By Mr. Turner :

Q. Was there any protest on the part of owners of property in the vicinity of the present quarantine station at the time of the establishment of the quarantine—I mean, owners of property between Point Levis wharf and the present quarantine station?—A. I am sorry to say there were some protests. There was a protest made on account of the place not being suitable, according to the views of certain persons, and they suggested that some other grounds nearer to the Grand Trunk Railway would be more suitable.

Q. Does Colonel Rhodes own any property in the vicinity of the quarantine station?—A. Yes; he is the owner of quite a piece of land very near to the quarantine station, between the quarantine station and the wharf.

Q. Did he protest against the quarantine station being there on behalf of his own land?—A. I do not say he protested on behalf of his own land, but I know that he offered his own land for sale for the purpose of a quarantine station.

Q. It was not taken by the Government?—A. It was not taken by the Government.

Q. You have sufficient space for the quarantine station where it is now?—A. Yes; we have sufficient space for the quarantine, and the Government owns very much more land there than we can ever employ.

By Mr. Smith :

Q. Do you think the quarantine station is better where it is than down is some island in the river, where animals, which might possibly be infected, could not mix with the cattle on the main land?—A. The quarantine station could not be put on an island, for several reasons. It would cost a very large amount to build a wharf at any island for steamers to discharge their cargo of cattle, and then there would be great difficulty in getting forage and other supplies or animals on an island. Then, again, there is the additional trouble of taking the cattle from a quarantine station on an island to the point of destination.

This concluded the evidence of the witness.

WILLIAM TOFIELD, Merchant, of Point Levis, South Quebec, gave the following evidence :—

By Mr. Turner :

Q. Do you know any of the facts in connection with the quarantine station at Point Levis?—A. Yes, sir; I have had to do with the quarantine station business ever since it was opened, as I supplied the feed for the cattle.

By Mr. Smith :

Q. Have the cattle been supplied under contract or merely by purchase?—A. The importers of the cattle buy what fodder they may require by the ton for each lot, with the exception of the time when the cattle were diseased in the quarantine, and then the bills for the feeding of the cattle were all paid by the Government.

Q. That only happened once, when pleuro-pneumonia developed in the quarantine?—A. Yes.

Q. Do you think the place suitable for a quarantine station?—A. I do not see any better place in the country for a quarantine station, unless it is fixed on some island in the river; but if that were done it would be impossible to carry on the business there. The present quarantine station is in an isolated part of the country and in a very healthy part of the country. There is always plenty of good water for the cattle.

Q. Is it close to the place where the steamers land?—Yes; very close. The cattle, of course, have to pass a certain amount on the public road, but that they would have to do so in any place they went; but with the precautions which have been taken by the Government employés and which have been explained by Dr. Couture, it is impossible that any diseased could spread in the quarantine station. I am acquainted with the quarantine station thoroughly, and I wish to corroborate the evidence Dr. Couture has given with regard to the precautions taken against the spread of the disease. The wharves are always well cleaned, as well as the roads, and the quarantine station after the arrival of the cattle, and both roads and wharves disinfected by lime. I can also corroborate the statement that everything that came into contact with the cattle suffering from pleuro-pneumonia, seven or eight years ago, were burnt up at the expense of the Government. All the articles that carried the food to the cattle in the quarantine during the prevalence of the disease were burnt, and were never sent back to me, and the cost was paid by the Government. The men's clothing was burnt, and the ropes and halters of the cattle—in fact, everything that came in contact with them. All the bills were paid by the Canadian Government.

By Mr. Smith :

Q. Were the cattle shipped from Point Levis before the quarantine station was made there?—A. Yes; there were quite a number of cattle shipped from Levis before the quarantine station was there, and cattle have been shipped since then.

Q. You don't consider there was any danger from the quarantine?—A. Certainly there can be no danger. I must also state that I did not agree with Colonel Rhodes' statement, that the fact of the quarantine station being at Levis stopped the shipment of cattle from there. I do not think the quarantine station had anything to do with the matter in any shape or form.

By Mr. Turner :

Q. Could the Government of Canada do anything more than they are doing in the way of precautions to prevent the spread of disease to the cattle in Canada?—A. I don't see how they could. I don't think any further precautions could be taken than there are at present. The Government have done all they possibly could for the protection of our own cattle. In fact, in my opinion, they have even gone to the trouble to take what I consider unnecessary precautions.

Q. You occupied as tenant a hotel belonging to Colonel Rhodes?—A. Yes; for nearly twenty years.

Q. Did he ever make any threats as regards the cancelling of your lease because of the active part you have taken in connection with the quarantine at Levis?—A. He never did that, but I have had many interviews with Colonel Rhodes respecting the quarantine, and he was against us from the very first day that it was established on its present site. I think I may turn the matter the other way, and state that I told him that if the quarantine were removed I should have to hand over the hotel to him.

By Mr. Smith :

Q. Do you think the quarantine station at Levis was a benefit to you?—A. Certainly it was, because I could not have remained there so long as I did if it had not been for the quarantine station.

Q. It brought a number of people to your hotel?—A. Yes; the owners of the cattle frequently stayed at my hotel.

By Mr. Turner :

Q. Do you consider that you feed cattle here as cheaply as they could be fed in Montreal?—A. Except, perhaps, in the matter of grain, on which there would be extra freight from the west here, we could feed them cheaper here than in Montreal.

Q. Could you buy them grain here?—A. Well, the grain I have bought here has never been satisfactory fodder for cattle. If the mills got into the proper way of making meal, as they do in Montreal, it could be used for cattle. I think, however, we could sell the grain here as cheap as in Montreal, and the hay ought to be much cheaper here.

Q. You would have to pay the extra cost of handling it and carrying it from the south side?—A. That would not be a very expensive matter. It would not do for me to live on the south side Quebec and do business at Quebec. The trouble about the grain in Quebec is that the cattle men find it too fine for the animals, but if we had a large demand for it here that could be easily remedied and the mills could go into that business.

By Mr. Smith :

Q. Is Point Levis a suitable place to ship cattle from?—A. Yes; a very suitable place. The facilities are excellent there, and I do not see why cattle should not be shipped from Point Levis as well as from anywhere else. The Grand Trunk Railway yards are not more than 300 or 400 yards from the wharf, and there is plenty of good water and shed accommodation there for about a thousand head of cattle. The sheds are now out of repair, but they could be put into proper order in three or four weeks without very much expense if the trade demanded it. The Grand Trunk Railway has spent about six or seven thousand dollars in making a good foundation for the sheds and putting covers over them and bringing water into the yards.

Q. But that latterly has not been productive of any revenue?—A. No, sir. The trade has greatly died out there, but I remember the time when cattle from Prince Edward Island and the Lower Provinces were shipped from Point Levis to England. I remember when Senator Carvill, the present Lieutenant-Governor of Prince Edward Island, sent two lots of sheep here for shipment to England. But this trade was afterwards done from Halifax.

This concluded the evidence of the witness.

P. V. VALIN, ex-Member of the House of Commons of Canada, and Chairman of the Harbour Commissioners of the Port of Quebec, gave the following evidence:—

By Mr. Smith :

Q. There has been a report current here that the Harbour Commissioners intended to make further facilities for the shipment of cattle from the Louise Basin to England?—A. Yes; and I think there is no better port in the Dominion than the port of Quebec would be for the shipment of cattle.

Q. It is reported that you intend to erect sheds and arrange other matters so as to try and bring the cattle trade to this port?—A. Yes; we have had a plan already made for that purpose, and it is our intention to do so. I understand it is the intention of the Harbour Commissioners of Quebec to afford every accommodation in their power for the export cattle trade.

Q. At the Louise Basin?—A. Yes.

Q. Do you think that if the facilities were afforded here, and if the people got into the way of shipping a few cargoes from the port of Quebec, that the trade would develop here, and that the advantages at the port of Quebec, as regards the cool weather and comfort of the cattle during shipment, will bring the trade here?—

A. Yes; I think it possible that the cattle trade will be come to the port of Quebec, for we have greater advantages for shipping here than they have in Montreal. Of course, in coming to Quebec from western Canada the cattle have a longer railroad journey, but if the railway company could find a way to make the haulage cheaper, greater facilities would be afforded at Quebec than in Montreal and the cattle trade would necessarily come to the port of Quebec.

Q. I suppose you have heard of the advantages afforded in Quebec by the cooler weather as compared with Montreal?—A. Of course it is far better that the cattle should be shipped from Quebec than in Montreal. They have a shorter journey than on the ocean, and in a very few hours we get them down to the salt water, and altogether the facilities are much better here.

Q. Do you think it would be more expensive to ship the cattle from here, taking everything into consideration, than it would be to ship them from Montreal, where the cattle sometimes get heated and die on the passage? Do you think it would be as cheap or cheaper from Quebec?—A. I think if we consider everything in connection with the cattle export trade that it would be much cheaper to ship the animals from Quebec. I have seen cattle in Montreal which came from the west, and they have been so heated and tired that they laid down on the streets, and the men in charge had to prod them with a pointed stick in order to get them up. The cattle seemed as if they would sooner die on the street than walk any further. I have seen the men in charge at Montreal go to the river for water and throw the water over the animals to cool them. I should think that under these circumstances the cattle were not in proper state to ship.

Q. Don't you think it would be a more expensive matter to bring them down here and ship them from here than it would be to ship them from Montreal?—A. That would depend altogether on the freight charged by the railway companies for the freight from Montreal to Quebec. It would depend as to what arrangement the shippers could make with the railway companies. As to the health of the cattle, I believe they would be much better if they were shipped from the port of Quebec. They are taken direct from the cars to the ship, and they are altogether in better health here when put on board the ship than they can be in Montreal. I have seen cattle walk along the north shore, 60 miles below Quebec, and they have come up here in excellent condition, because of the cool air. They are in much better health when they arrive here from Bay St. Paul and other places below Quebec, after walking the whole distance, than our western cattle when put on board the steamers at Montreal.

Q. After all, I suppose it is a question of expense as to whether it will be cheaper to ship from here than from Montreal?—A. Yes; I suppose it is largely a question of expense, but in my opinion, although the cost of the railway journey may be a little more, yet on account of the great benefit which the cattle would receive from fresh air here, the cheaper the fodder when they are staying here, the superior health in which they are placed on board the vessels at Quebec, would, in my opinion, cause the animals to realize a larger price when they get to the other side.

By Mr. Turner :

Q. I may ask, Mr. Valin, if it is not the case the Harbour Commissioners have made no charge on vessels taking cattle on board here last season?—A. We have charged no harbour fees, and I think the same rule is intended for next season.

By Mr. Smith :

Q. You charge nothing for side wharfage on vessels which come to ship cattle?—A. No. I understand that in Montreal they charge the cattle a cent a head for

the port warden's fees. There are 5 cents per head charged for top wharfage in Montreal, and 1 cent for port warden's fees, making 6 cents a head in all.

You don't intend to charge top wharfage here?—A. We charge nothing whatever here, and therefore that would be 5 or 6 cents a head cheaper than in Montreal.

This concluded the evidence of the witness.

JOSEPH BROWN, of Quebec, Pilot between Quebec and Father Point, gave the following evidence:—

I have made passages for eight years on the Dominion Company's steamers between Quebec and Montreal, and I am acquainted with the cattle-carrying trade between those two points. I was the first pilot in charge of a ship which carried cattle out of Canada for the year 1874. That ship was called the "European," and she formerly belonged to the Allan Line. I think the vessel was loaded by Mr. Shaw in Montreal, and she carried 199 head of cattle. I went as far as Father Point with the vessel. I went on board the vessel at Montreal and took charge of her at the port of Quebec. From the time the cattle left Quebec until they went to Father Point they were well taken care of, and none died on board.

By Mr. Smith :

Q. Do you know if the cattle arrived on the other side safely?—A. Yes; I believe they all arrived in good condition.

Q. Have you anything to say about the shipment of cattle between Montreal and Quebec?—A. I was a resident of Montreal for eight years, and did business for the Dominion Steamship Company. I have gone aboard ships in Montreal and taken charge of them when they arrived in Quebec. Mr. MacPherson, of Montreal, used to send me a telegram to come to the ship in Montreal, and when they disembarked the pilot from Montreal to Quebec I took charge of the ship from Quebec to Father Point. I have seen the cattle shipped at Montreal. I was also pilot on the Donaldson Line, for which Mr. Frank Ross is agent, and I was pilot on the Ross Line.

Q. Did you consider the boats of the Donaldson and Ross lines good for carrying cattle?—A. Some of them were as good boats for carrying cattle as those belonging to the three large lines—the Allan, Dominion and Beaver. I have travelled over to England with cattle. I was pilot on one ship which could not disembark me at Father Point on account of the heavy weather, and they took me to Bristol, in England. One of these ships was the steamer called the "Mississippi," and she carried cattle. I think the steamer sailed on the 23rd November. We had deck loads of cattle on the top decks. The two vessels on which I was carried to England were perfectly good vessels for carrying cattle. The cattle were not too cold on the upper deck, although it was during the winter, and they always seemed in excellent condition and were well taken care of. I never went to bed before one or two in the morning on board the steamers, and I always saw that the cattle were properly attended to. The sheds on these vessels I think were of light construction. They were made of 1-inch boards and 2-inch uprights. I have read of the statements made as regards the cruelty to cattle in Mr. Plimsoll's book, but I never saw any such cruelty to animals as mentioned in that book. They were always humanely treated. There was no hay put in their ears, and the hay set on fire, as Mr. Plimsoll states.

Mr. SMITH.—Mr. Plimsoll says in his book that he only had this on the authority of some man in the United States who wrote to the London papers that there was hay put into the ears of animals and the hay fired.

Mr. BROWN.—Well, that may be the case, but it is absurd to think any such fire could be lighted on board the ship. Why, if this thing were done the ships would be burnt, and not a life saved. Mr. Plimsoll should not put the blame on Canada if it is done in the United States, and I know from my own experience that every animal which crosses to England is as well cared for as a passenger on board the ship.

Mr. SMITH.—Mr. Plimsoll does not make any reference to Canada. He states this in connection with vessels that sailed from the United States.

MR. BROWN.—Well, I cannot say as to that. But my experience is that the cattle crossing the Atlantic Ocean are always well taken care of. The animals are all allowed to lie down, and that is only reasonable, because in heavy sea they are better lying down than standing up. If the cattle are standing up and the vessel takes a heavy lurch they fall and break their legs; whereas, if they are lying down they are perfectly safe. It is to the interest of every party on board the vessel to take the best care possible of the animals and to try to make them lie down in heavy weather.

Q. I suppose that in the vessels all the animals can not lie down at the same time?—A. Well, they take their turn about lying down, just the same as human beings.

Q. It has been given in evidence that the cattle had plenty of rest during the voyage and room to lie down, and the opinion seems to be they were allowed 2 feet 8 inches spaces for each animal, and that they would be just as comfortable as if they were in their stables?—A. Yes; I should think that space would allow them all to lie down in heavy weather. I have been crossing the Atlantic since 1852, and I know what I am speaking about.

By Mr. Turner :

Q. You were living in Montreal for eight years?—A. Yes, sir.

Q. I suppose you frequently came down from Montreal to Quebec on the steamers?—A. Yes, sir.

Q. And during that time you have made frequent trips on cattle vessels?—A. Yes, sir.

Q. Did the cattle suffer from heat between Montreal and Quebec?—A. Yes; sometimes they suffer from the excessive heat. The fat cattle suffer particularly in this way.

Q. Do they have all the water that they require?—A. Yes; they had all the water they required, because there is fresh water all the way down. I always found the distillery or fat cattle suffer the most in hot weather especially, if they are between decks. In my opinion these cattle are much better on the upper decks, because the ship going through the water makes a current of air which they receive. On the upper deck and the spar deck they were always better off. When a ship would lose five head of cattle between Montreal and Quebec she would lose none from Quebec to Father Point.

By Mr. Smith :

Q. Were the hatches on the vessels always open on the vessel from Montreal to Quebec?—A. Yes, sir. The hatches and ventilators were always open.

Q. If they placed cattle on the hatches could there be proper ventilation?—A. I do not think so. But they had stationary ventilators on both sides of the ship, and the port holes were always open.

Q. If they had steam fans pumping in fresh air constantly when the ship was going through the water and up-take ventilators would not the cattle be cool?—A. Undoubtedly they would.

By Mr. Turner :

Q. Would there be as many deaths among the cattle between Montreal and Quebec if these steam fans were in use?—A. No, sir; there would not.

Q. In heavy weather at sea, if they had those steam fans the cattle would have better ventilation, would they not?—A. Of course, if the hatches are battened down during heavy sea they would want artificial ventilation. A good deal, however, depends on how the ship is handled. If the vessel is nursed during heavy sea the cattle would be nursed also. During a heavy storm a cattle vessel should be wore round directly, and her head put to the sea, steaming slowly. That would be called head-reaching. I have been on board a ship when that has been done, and the cattle have been safe in heavy weather. The cattle do not suffer so much from the pitching as

from the rolling. If the vessel is steadied during heavy weather the cattle can be kept in good condition.

Mr. TURNER, President of the Board of Trade, files the following letter, which he received from Mr. William Cunningham, the Secretary of the Dominion Live Stock Association, in reference to the shipment of cattle made from Quebec last year :—

“ MONTREAL, 12th January, 1891.

RICHARD TURNER, Esq.,
President Quebec Board of Trade,
Quebec.

“ DEAR SIR,—Your favour to hand. The vessels which took cattle from Quebec during the season of 1890 are as follows, viz. :—

	Cattle.	Sheep.
August 30, 1890.—SS. “ Osmanli ”.....	419	490
Sept. 10, 1890.—SS. “ Linda ”.....	541	....
Nov. 7, 1890.—SS. “ Cassimo ”.....	482	....
do 7, 1890.—SS. “ Serica ”.....	630	....
	<u>2082</u>	<u>490</u>

“ These boats were loaded with cattle in from three to four hours. The reason of this is that the facilities at Quebec for loading cattle are better; the dead cargo was all finished, and there was none of the noise of bustle about the ships, such as we have here, where cattle and cargo is being loaded at the same time.

“ It usually takes about ten hours to rail cattle from Montreal to Quebec.

“ Yours faithfully,

“ W. CUNNINGHAM.”

Mr. TURNER also files pamphlet entitled “ The Port of Quebec—Its Facilities and Prospects—The Past, Present and Future of Quebec's Shipping Trade.” Written by E. T. D. Chambers, of Quebec.

RICHARD TURNER, President of the Board of Trade, Quebec, at the conclusion of the Enquiry, said :—

It affords me much pleasure to propose a vote of thanks to Mr. Smith, the Deputy Minister of Marine, who has acted as Commissioner in this enquiry. I thank him for the courtesy he has extended to us, and for the great patience with which he has listened to the proceedings here. He has acted in a manner which makes it incumbent on the commercial men of Quebec to make some acknowledgement to him, and on behalf of the Board of Trade I beg to tender him our most sincere and cordial thanks. (Applause). I wish also to thank the Government for the interest they have taken in the cattle trade carried on between the Dominion of Canada and England, which is not only an important matter to us in Quebec, but to the entire Dominion. As stated by the Hon. Mr. Joly, before this enquiry, it would be a deplorable think for the whole Dominion if this cattle trade were stopped. We can measure its importance now, but we cannot begin to realize what immense proportions this trade between Canada and England will assume in the future. On behalf of the Board of Trade and the commercial community of Quebec, I tender to Mr. Smith our most sincere thanks.

Mr. P. V. VALIN, President of the Harbour Commissioners, said :—I beg to second the vote of thanks which has been tendered to you by the President of our Board of Trade. It was with much pleasure that we in Quebec heard that you, sir, were going to open an enquiry here, and the information which you gave us in your opening speech, which was new to many of us, explained to us the great advantages of the

cattle trade between England and Canada, and showed us in Quebec that we had a splendid possibility of reaping benefit from this trade. I trust the evidence which was given to you in Quebec was satisfactory, and I trust, as you have no doubt come to the conclusion that the port of Quebec affords facilities unparalleled in the world for the carrying on of a great cattle export trade; we, in Quebec, have hopes that the future will bring great benefit to us, and that our trade will be developed and enlarged. In this connection I should also say that Mr. Turner, the President of the Board of Trade, has displayed great energy in this matter, both during the sitting of this enquiry in Montreal and Quebec, and that he deserves the thanks of the whole commercial community for presenting in such an admirable way the facilities which the port of Quebec affords to the general public. I have no doubt that your report, Mr. Deputy Minister, will be such that it will show the advantages which the port of Quebec possesses for the carrying on of this trade. I thank you very cordially for the attention you have given during this enquiry and the trouble you have gone to in eliciting all the evidence which we can adduce on the subject.

Mr. SMITH, Deputy Minister of Marine, in reply, said:—I feel much indebted to you, gentlemen, for the kind manner in which you have expressed yourselves as to the way in which this enquiry has been conducted. As I explained to you at the re-opening of the proceedings, the Government deem that it is advisable that the views of the merchants and the people of Quebec should be obtained in this matter. Although the cattle trade has not been developed to any great extent at the port of Quebec, as compared with Montreal, it was felt by the Marine Department at Ottawa and by the Government that the opinions of the people should be taken, as it was known there was a great possibility for the future for this ancient port, which latterly has been so developed as to accommodate all the trade which may come here. There has only as yet been a beginning in the cattle export trade from the port of Quebec, but I think enough evidence has been given during this enquiry to show that Quebec has all the facilities necessary to carry on this trade. When these facilities, already alluded to and now explained to the public, are thoroughly known, there is no doubt whatever that a large amount of the trade will come to the port of Quebec, and that the advantages which Quebec affords will be availed of. We know very well that there is great difficulty in bringing cattle during the very hot weather from Montreal to Quebec, and that great loss has occurred on account of the heat, which would not be the case if the cattle were shipped from Quebec. It has been given in evidence here that as soon as the cattle get down to Quebec, though they may be in poor condition in arriving here, the fresh air braces them up and they are at once recuperated. If the people of Quebec who are engaged in commerce can only induce some of the cattle dealers to make a beginning in shipping cattle from here I think it very likely that Quebec would become the centre of a very large proportion of this business. I hope I may live to see the day when there will be considerable cattle export trade done at this port. At all events, the views of you, gentlemen, who are interested in this business, have been obtained and put on record, and they will be laid before the Canadian Government and forwarded to the English Government with the other evidence taken on this subject. Of course, I may point out, as I have done before, that the Government cannot do very much in a matter like this. A great deal depends upon the exporters of cattle themselves, and upon the enterprise and energy of the commercial community of Quebec. If the cattle exporters find that they can ship to better advantage from Quebec than from Montreal the trade will come here; but people in trade, as well as people in all spheres of life, are selfish, to a certain extent. They are not going to embark in any particular branch of business which will not be for their own benefit. They must first be satisfied that they are going to benefit themselves. As soon as the people get convinced that there are more facilities at Quebec and better means for shipping cattle here than at other ports, without any extra expense and without any losses, then the trade will come here, and when it does come here I have no doubt that it will be carried on vigorously. The first thing, in my opinion, which you will have to do here is to arrange that steamers leaving this port shall provide accommodation for

the carrying of cattle, and that when they are chartered space shall be secured for them as well as for the shipment of lumber. It appears to me, generally speaking, that there is a great opportunity in this port for the shipment of cattle, more especially during the hot summer months. Under any circumstances, I wish the city of Quebec and the port of Quebec every possible success, and I trust that in a few years trade will develop to such an extent as will be satisfactory to those who take an interest in the welfare of the port. I thank you for the kindness that you have extended to me since I arrived in your city.

The Enquiry at Quebec then closed.

ENQUIRY INTO THE CATTLE EXPORT TRADE

BETWEEN

THE DOMINION OF CANADA AND GREAT BRITAIN.

HARBOUR COMMISSIONER'S OFFICE,
THREE RIVERS, 15th January, 1891.

On the 15th day of January, 1891, Mr. Wm. Smith, Deputy Minister of Marine of Canada, attended at the office of the Harbour Commissioners of the City of Three Rivers to hear evidence in regard the Live Cattle export trade between the Dominion of Canada and Great Britain.

Deposition of ALEXANDER BAPTIST, Lumber Merchant, of the City of Three Rivers :—

By Mr. Smith :

Q. What is the extent of the export of lumber from Three Rivers ?—A. In 1887 we have shipped about 42,500,000 feet of lumber. A portion of this wood is sent to Quebec to be shipped there. In Three Rivers we have no ship labour society. The quantity of lumber manufactured here to be sent to England is about twenty to thirty millions feet per year ; and for the United States market fifteen millions five hundred thousand to twenty millions feet, and for the South American market about two or three millions. The facilities for shipping cattle in Three Rivers are very good ; we have a great deal of accommodation now. It would not cost much to improve, but already we have good accommodation now. Large steamers can take cattle at two wharves in Three Rivers.

Q. Is the weather as warm here as in Montreal ?—A. I don't think the weather is as warm. We have flat lands near the town for cattle, and hay is cultivated here to a greater extent than in any part of the Province. The hay is often sent from here to Montreal. Hay generally sells here at from \$4 to \$7 per 100 bundles. This year it sold at \$4 per 100 bundles—that is, \$5 to \$6 a ton. The cost of freight to send hay to Montreal is \$1.50 to \$2 per ton. There is that much difference between the price of hay in Montreal and in Three Rivers.

Q. The reasons you have stated in favour of Three Rivers are, that the facilities for shipping cattle are good, the lands are level near the town, there is no labour society here, and the cost of hay is less than in Montreal ; and the weather is cooler here than in Montreal ?—A. Yes ; and up to the present we have had no strikes.

(Signed) ALEX. BAPTIST.

Evidence presented by GEO. BALGER, Secretary of the Three Rivers Board of Trade :—

MR. COMMISSIONER,—The information contained in your statement as to the reason for holding the present enquête on the cattle shipping trade, as well as the evidence furnished in Montreal and Quebec, render it unnecessary for us in Three Rivers to go into long details. We need only mention that the cattle shipping trade in Canada is comparatively of recent date ; but from its commencement we can furnish evidence

to show that the danger which to-day threatens one of our most important branches of trade dates from its very infancy. At any rate, in Three Rivers we were always of opinion that the port of Montreal—with its present accommodation—is entirely unfit for this trade; and in this we are sustained by the very evidence produced during the enquiry in Montreal; for if the charges as to the cruel treatment of cattle on board ship have been satisfactorily disproved, sufficient has been brought forward to show that the people of England are not at all to blame if they refuse to accept any longer cattle so carelessly handled, the meat of which cannot be acceptable to many consumers. The fact that nearly every season the press of Montreal itself sounded the alarm, and furnished statements of cases which shippers have every reason to withhold from the public, is another proof of our assertion.

More than ten years ago we called the attention of parties interested in the cattle trade to the defective system of shipping cattle coming from long distances without allowing them a few day's rest before going on shipboard, especially after being crowded together in the railway cars for several days, in warm weather, and with insufficient care and feeding, as very frequently is the case.

And when years went by, and every season added to the danger of seeing the consumers in England becoming tired of our neglect, we not only communicated with the cattle men and underwriters, but offered the various steamship companies every assistance to allay as much as possible the inconvenience and loss to the trade resulting from excessive heat during midsummer and a prolonged stay on board the vessel in Montreal, and the upper portion of the river. Witnesses are here to prove that every year during July and August carcasses of cattle are picked up along the banks of the river from Montreal downwards. The cases of the "Bristol," the "Batavia," and many other steamers are yet in the memory of every one. And the decision of the Privy Council of Great Britain, in August, 1885, was certainly not foreign to the doleful stories that were published all over the country and in England about the death rate amongst cattle shipped during the hot weather of July.

But all this was of no avail. Obstinate following their unreasoning confidence in their infallibility, Montreal shippers did not seem to realize the situation or to be otherwise interested than in controlling as much as possible the well-paying freight. Here we must give credit to the cattle exporters, and particularly to the Western Canadians, who, having every reason to ship their cattle in good condition, were ready to send their live stock to Three Rivers, provided the steamers would call for them at our port. The Canadian Pacific Railway Company also was ready to second the proposal, but the offer never met with any response from any of the steamship companies.

We contend that the heavy mortality among cattle shipped from the port of Montreal is not only due to the shipping of the animals while in an exhausted condition or from ill-treatment, not even through the unavoidable and dangerous exposure in the scorching sun or crowded wharfs, but, in addition to these causes, being overheated during the long passage down the river and through Lake St. Peter the animals are more likely to contract disease; and to this circumstance may be traced the greater portion of the loss, and also the unhealthy condition in which so many of them arrive at the port of discharge.

We do not hesitate to lay the blame for such a state of affairs on the steamship companies of Montreal, and we cannot but express thanks to Mr. Plimsoll for having called the attention of the Imperial as well as the Dominion Government to the pitiful condition of this trade, which is prejudicial not only to the trade itself but also to the good reputation of Canada.

We also contend that the port of Three Rivers possesses all the *desiderata* calculated to remove every inconvenience and danger now attending the shipment of cattle from Canada.

Situated below Lake St. Peter, with no tide to speak of (averaging about 9 inches) large wharves, with upward of 36 feet of water alongside, and railway connection on both sides of the river,—the port is second to none in regard to facility of approach for handling and discharging vessels and cargoes. It is a matter of fact that few

steamers leaving Montreal are able to reach Quebec on the same day. They must anchor for the night at Sorel, in the neighbourhood of Three Rivers or at Batiscan. With a lot of cattle on board it is only on the second day after their departure from Montreal that pure air and a fresh breeze can comfort the poor animals. Now, if steamships having taken their general cargo at Montreal, arrive here the same evening, they can put their cattle on board during the night and leave early in the morning, and Quebec is reached before the heat of the sun is strong enough to affect the animals. And the cattle will have had, before shipment, a much-needed rest, as from the city limits and extending westward along the St. Lawrence for several miles we have a magnificent tract of beautiful grazing land, as level as a prairie, and watered by several streams. This *Banlieue* is traversed by the Canadian Pacific Railway, with a branch to deep water at our shipping wharves, forming without exception the most desirable *entrepot* for the cattle trade that can be possibly imagined. From this resting or recruiting place the cattle can be driven to the ship's side at any hour of the day or night without the slightest inconvenience or danger. Such a favourable recruiting ground and such facilities for handling and shipping cattle do not exist at any other port in Canada.

In addition to these natural facilities, the Harbour Commissioners have decided to charge no tonnage dues on vessels shipping cattle at the port of Three Rivers, and the city corporation agree to furnish the beautiful fresh St. Maurice water to all such vessels free of charge.

The above, Mr. Commissioner, is the evidence the Three Rivers Board of Trade desires to submit to the Government, trusting that in the interest of this important branch of our Canadian trade, the existence of which is so seriously threatened at present, steps may be taken to prevent in future the shipment of cattle coming from long distances before proper rest shall be given them; also, that during the heated term no shipment of cattle shall be allowed from any port which is not in a position to comply with all the sanitary necessities of the case. The evidence you have already obtained, especially at the enquiry in Montreal, is quite sufficient to show the necessity that exists for prompt and beneficial action in order to remedy the evils connected with the trade.

GEORGES BALCER,

Secretary Three Rivers Board of Trade.

Deposition of ONÉSIME ST. PIERRE, Assistant Stevedore, from the Parish of Cap de la Magdeleine:—

By Mr. Smith:

Q. Have you ever found any dead cattle floating down the river?—A. Yes; I have picked up two myself six years ago. I have been away from this place for the last four years. When I picked up those two cattle six years ago I saw some other people picking up others at the same time.

Q. How many cattle do you believe died on board ship between Montreal and Three Rivers during that summer?—A. I believe several died during that summer. It is hard to tell the exact number, but a pilot told me that during that summer, between Sorel and Batiscan, thirty-six had died on board one steamer. That is six years ago.

(Signed)

ONÉSIME ST. PIERRE.

Deposition of FLAVIEN BOURASSA, Stevedore, from the Parish of Cap de la Magdeleine:—

Three years ago I was loading a ship with lumber at Baptist's Island. There was on that steamer some cattle that had been taken on board at Montreal. Before I commenced loading wood the first officer on board asked me to land an animal

which had died on board the ship, and during twenty-four hours three more died on board and we landed them on the wharf. That was from Saturday until Monday. In the same summer, three weeks after, we had another ship here from Montreal and two cattle died on board. At different times during that summer we threw overboard between fifteen to twenty dead cattle. Every summer we see dead cattle thrown overboard from ships floating down the river.

By Mr. Smith:

Q. Do you believe you saw about twenty dead cattle during the summer?—A. Yes; about that many.

(Signed)

FLAVIEN BOURASSA.

Deposition of ARTHUR BELLEFEUILLE, Machinist, of the City of Three Rivers:—

We were hunting last year on Lake St. Peter, near Three Rivers. We were passing along the shore and found on the beach a dead animal. We saw only one there. A lot of crows were around the dead carcass. After that I saw another dead oxen floating down the river in front of the city.

(Signed)

ARTHUR BELLEFEUILLE.

Deposition of FRs. BOURASSA, Tanner, of the City of Three Rivers:—

I have often bought skins of animals that were found dead and floating down the river. I buy some every summer, but last year I bought less than in previous summers. Two years ago I bought fifteen or twenty; last year I got about ten. These are the hides of animals that are thrown overboard steamers between Montreal and Three Rivers, and that are found in the vicinity of Three Rivers.

Q. How do you recognize that they are animals found in the river?—A. That is easy to recognize by the size of the skin.

Q. Are those skins bought by the pound?—A. Yes; and I have bought skins weighing as much as one hundred and fifty and one hundred and sixty pounds.

Q. How much do you pay for those skins per pound?—A. Five or six cents a pound.

Q. What is the average weight of a cattle skin here?—A. The weight is forty pounds for medium animals brought up in this country. I have bought skins of animals thrown overboard steamers weighing one hundred and sixty pounds. The medium weight of those skins is eighty pounds, and the medium of the skins of our own cattle is thirty pounds to fifty.

Q. What do you do with the horns of cattle?—A. We never buy the horns with the skins; the horns are thrown away.

FRANÇOIS^{his} x BOURASSA.
mark.

Witness: H. E. MÉTHOT.

Deposition of TÉLESPHORE EUSÈBE NORMAND, Member of Provincial Parliament, Mayor of the City of Three Rivers:—

We have a large farm of three hundred acres cultivated land near this city, and the city of Three Rivers will give one hundred acres of this land to any company that will come here to establish a stock yard, and ship cattle here on board steamers for exportation, or to prepare dressed meat for shipment free of taxes, and also use of water free. What I say here now is confirmed by two aldermen of the said city, Messrs. Bellefeuille and Vanasse, now present at this meeting, and also confirmed by a resolution of the council passed about eight or nine years ago and still in force in the district of Three Rivers and in the vicinity. We cultivate in

the vicinity of the city about two hundred and fifty thousand tons of hay and three millions five hundred thousand bushels of oats. There is no labour organization here as they have elsewhere, so the labour is very cheap. I confirm what Mr. William Ritchie says about steamers having to stop above Three Rivers for the night and to wait for the tide.

(Signed) T. E. NORMAND.

Deposition of EDWARD BERNIER, of the City of Three Rivers, Labourer:—

Last year I found the carcass of an animal near the city, about one mile from Three Rivers. About two or three years ago I went to Bécancour, a place about six miles from Three Rivers, and saw near the shore six other carcasses, which were floating down the river. I asked some one where they came from, and they told me that they were thrown overboard by steamers going down the river.

EDWARD ^{his} x BERNIER.
mark

Witness: H. E. MÉTHOT.

Deposition of Captain CHARLES BOURGEOIS, of the City of Three Rivers:—

I have been captain of the ferry boat between Three Rivers and Ste. Angèle for about forty years. For the last ten years I saw from time to time dead cattle floating down the river, chiefly during the summer months. I have seen at least fifteen to twenty each summer.

(Signed) CAPT. C. BOURGEOIS.

Deposition of JAMES MALONE, Hay, Grain and Lumber Shipper, of the City of Three Rivers:—

The hay in this district is always one dollar and fifty cents per ton to two dollars per ton less than in Montreal or Quebec; the oats five cents per bushel less and *moulée*, crane, bran and *goudriole* from ten to fifteen cents less per bushel; straw one dollar and fifty cents less. We have here more hay, straw, &c., in this district yearly, than would supply all the cattle that is shipped from Canada and the United States, to the United Kingdom of Great Britain every year. We also have better facilities for resting cattle here than they have in Quebec or Montreal, as besides the Commune, we have the Pines, that would shelter twenty thousand head of cattle under the pine trees which is only about six acres from the wharfs. As regards the amount of hay that grows in this district, the amount is something enormous.

(Signed) JAMES MALONE.

Deposition of EDMOND BLAIS, Ship Broker, of the City of Three Rivers:—

It is to my knowledge that ocean steamers, after having taken in their general cargo in Montreal, had to wait twenty-four and sometimes thirty-six hours to ship their cattle, and such delay would not occur here. This, in my opinion, happens because of want of accommodation for the railway cars. It would be cheaper for the steamers to come here, and there would be less delay, as our port affords all the advantages for dispatch and port accommodation.

(Signed) EDMOND BLAIS.

Deposition of WILLIAM RITCHIE, of the City of Three Rivers, Lumber Merchant:—

I am of the opinion that the cattle trade can be done here, in Three Rivers, more advantageously than in Montreal or Quebec, and the reasons are that the rail

way companies will offer advantages to bring cattle here. The Canadian Pacific Railway will deliver cattle at the same rate as they will be delivered at Montreal.

Q. Is that for the animals coming from the West?—A. Yes.

Q. What is the distance from St. Martin Junction to Three Rivers?—A. I think it is about eighty miles, and the Canadian Pacific Railway Company have offered to deliver the cattle here at the same price, for the reason that they can be delivered here in less time, and cars can be returned to Montreal quickly. Sometimes cattle trains are detained from St. Martin to the Montreal wharfs for thirty to forty hours before they can be sent to Montreal. In the meantime they could come to Three Rivers. There has been some cattle ships from Montreal which have loaded wood here and before coming here they had taken cattle on board at Montreal. Sometimes they stayed here twenty to twenty-four hours before completing their cargo, and they stayed here two or three days sometimes. On one occasion it occurred that six large cattle were landed on the wharf here dead, and they were sold here for making soap.

Q. If you were to ship cattle to England where would you send them—from here or Montreal?—A. If I were to send cattle to England, I would send them from Three Rivers; for the cost of transportation will be less, and there would be less danger of losing any. The hay is cheaper and the labour also, and the accommodations that we have in Three Rivers are more advantageous.

By Mr. Smith :

Q. Were the animals unloaded dead here on the wharf sold?—A. Yes; I think they gave five dollars to the man who unloaded them. We have prevented them from throwing them in the river as they were at our own wharf, and it is for that reason that they were unloaded on the wharf. They were sold to make soap to my knowledge. I know that cattle trains were detained at St. Martin Junction and other points *en route* to the Montreal wharfs before they could be unloaded from the railway cars on the wharf at Montreal. When they arrive there they are unloaded on the wharf. Sometimes they remain there twelve hours before they can be put on board ship, and if they were sent here they could be unloaded at the city's lands in the Commune. When loaded in Montreal it takes a considerable time to come down as far as Three Rivers, and oftentimes the steamer anchors one mile above Three Rivers for the night. When they do not stop here they are obliged to stop at Batis-can for the night or to wait for the tide, and if the cattle were shipped in Three Rivers the vessels could start here early in the morning, and pass Quebec before the great heat of the day. They could wait to load the cattle on board the ship just in time for the tides; so as to pass Cap à la Roche without being obliged to wait for the tide. A great advantage we have over Quebec facilities is that we have no flow tides here to prevent the loading of cattle at the wharf. To my knowledge, ships loaded with cattle in Montreal were here three days loading wood, and I have seen animals which died during that time in the hot weather while the ship was completing her cargo of lumber at our company's lumber yard.

(Signed) WM. RITCHIE.

Deposition of ZÉPHIRIN MARCHAND, Coal Merchant, of the City of Three Rivers:—
I have often seen dead cattle floating down the river between Lake St. Peter and Champlain.

By Mr. Smith :

Q. How long do you think a dead animal will float?—A. I think that after throwing them into the river they go to the bottom and only float some time after.

Q. How long do you think they keep fresh?—A. I don't know.

(Signed)

ZÉPHIRIN MARCHAND.

The following letter was submitted :—

“THREE RIVERS, 15th January, 1891.

“W. SMITH, Esq.,
“Deputy Minister of Marine,
“Ottawa.

“SIR,—In giving my evidence on the question of the shipment of cattle to England *via* the St. Lawrence, I have no hesitation in stating that I consider the port of Three Rivers as the best collecting point and best shipping point on the St. Lawrence.

“In addition to the advantage this port has in being situated several miles below the large expanse of shallow water known as Lake St. Peter, it possesses several other advantages which combine to render it the most suitable entrepôt for this large and increasing trade.

“A large tract of good grazing land, adjoining the city, intersected by several streams and traversed by the Canadian Pacific Railway, affords an excellent resting place for the cattle before shipment.

“A very important matter to be considered is the quality of the water supplied the cattle on board the Atlantic steamers, as their health depends in a great measure on this.

“The water of the St. Maurice at Three Rivers, a beautifully clear, cold, northern water, is probably the best water in Canada for this purpose.

“It is well known that a great many cattle die on board ship and are thrown overboard on the passage down the St. Lawrence below Montreal, especially during the warm weather. I am of opinion that if the cattle were allowed a short rest, in a suitable place, after leaving the railway cars, it would have the effect of placing them in a better position to stand the sea voyage. Just such a resting place exists at Three Rivers and contiguous to the St. Lawrence.

“But in order to carry on the cattle shipping trade properly at Three Rivers it would be absolutely necessary to construct a new wharf, specially for this trade, on the western front of the city adjoining this large grazing or resting ground. The Harbour Commissioners of Three Rivers have repeatedly called the attention of the Government to the necessity of building this wharf.

“An unlimited quantity of excellent hay can be always procured at Three Rivers cheaper than at any other shipping port on the St. Lawrence. Good, experienced men for feeding the cattle on board ship can also be obtained at this port.

“With the construction of the proposed cattle shipping wharf, the objection raised by some steamship lines to calling at Three Rivers to take cattle on board, would have no cause to exist.

“Your most obedient servant,

“JOSEPH REYNAR”.

Mr. TORRANCE, of the Dominion Steamship Company, submitted the following statistics :—

“TRANS-ATLANTIC CATTLE TRADE.

“To the Editors of the ‘*Liverpool Mercury*.’

“GENTLEMEN,—Since 1875, a period of 16 years, the steamers of the Dominion Line have carried 170,784 cattle and 246,799 sheep from Canada to England. The St. Lawrence shipping season extends from 1st May to the end of November.

The statistics for the last five years are as follows :—

1886—cattle carried,	8,431.	Loss per cent.,	0.13
1887 “ “	9,938.	“ “	0.16
1888 “ “	9,635.	“ “	0.64
1889 “ “	9,288.	“ “	0.71
1890 “ “	13,191.	“ “	0.80
1890 { Winter season, }	3,354.	“ “	0.59
{ from Portland, }			

Average for five years, 0.49.

“ In addition to the above, a large number of horses, cattle and sheep, pedigree stock for breeding purposes, have been carried from England, the mortality among these being still less than above. No loss of human life in consequence of carrying cattle has been experienced during the above-named period.

“ FLINN, MAIN & MONTGOMERY.

“ LIVERPOOL, 3rd Feb., 1891.”

INDEX

TO THE

EVIDENCE TAKEN AT MONTREAL.

	PAGE.
McLennan, John	9
Allan, Andrew.....	14
Reford, Robert.....	16
Monderloh, W. C.....	32
McLean, Charles.....	35
Popham, John.....	40
Bond, Edward L.....	48, 168, 231
Riley, Captain James J	51
Bickerdike, Robert.....	55
Coughlin, Cornelius	81
Crowe, John	88
Ogilvy, John.....	96
Acer, C. M.....	97 and 105
Perrault, Joseph Xavier	102
Eakins, James.....	109
Craig, William W.....	112
Extract from Dundee <i>Advertiser</i>	115
Frankland, Garrett F.....	118
Thompson, Archibald J.....	123
Routh, J. H.....	127
Dunne, John.....	127
Aikins, Andrew Wallace.....	133
Mullins, Henry A.....	135
Bliss, Martin	138
Briens, Alexander	139
Cochrane, Honourable M. H.....	145
Plimsoll, Samuel (Address).....	147
Kennedy, Nathan.....	153
Order in Council, (shipment of animals).....	164
Meehan, Richard	169
Murray, John C.....	171
Cochrane, W. F.....	172
Johns, Thos. F.....	175
Ryan, John J.....	181
Green, Michael.....	182
Howard, Captain	184
Mackay, Henry.....	188
Shaw, James G.....	191
Scanlan, Michael	202
Dick, James R.....	205
Watt, David Allan	207
Thom, James.....	217
Macmaster, Capt. John Andrew.....	221

	PAGE
Extract from New York <i>Tribune</i>	222
Chambers, Alexander	223
Cunningham, William	225
Classification, Ratings and Regulations....	233
Telfer, H. C.	239
Gould, Joseph	240
Hopper, Robert J.	241
Wilkinson, Patrick	242

EVIDENCE TAKEN AT QUEBEC.

Turner, Richard	251
Beckett, Thomas	257
Simons, William	260
Ray, Walter	275
Boswell, St. George	276
Burstall, John	279
Joly de Lotbinière, Hon. H. G.	282
Couture, Joseph Alphonse	285
Hall, William B.	289
Morin, Louis	290
Lamarre, François Xavier	291
Nesbitt, E. T.	291
Rhodes, Hon. Col. William	294
Couture, Joseph Adolphe	296
Tofield, William	298
Valin, P. V.	300
Brown, Joseph	302
Turner, Mr. (Letters and pamphlets filed)	304

EVIDENCES PRESENTED AT THREE RIVERS.

Baptist, Alexander	307
Balcer, Geo	307
St. Pierre, Onésime	309
Bourassa, Flavien	309
Bellefeuille, Arthur	310
Bourassa, Frs.	310
Normand, Téléphore Eugène	310
Bernier, Edouard	311
Bourgeois, Charles	311
Malone, James	311
Blais, Edmond	311
Ritchie, William	311
Marchand, Zéphirin	312
Reynar, Joseph (Letter submitted).	313
Tórrance, Mr. (Statistics)	313

DOMINION OF CANADA.

IMPERIAL DECK LOAD LEGISLATION.

REPORT OF EVIDENCE

TAKEN BY

MR. WM. SMITH, DEPUTY MINISTER OF MARINE

RELATIVE TO THE

CARRYING OF DECK LOADS

OF

TIMBER AND DEALS DURING THE WINTER MONTHS.

PRINTED BY ORDER OF PARLIAMENT



OTTAWA :

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1891.

REPORT

Of Evidence taken by Mr. William Smith, Deputy Minister of Marine of Canada, under instructions of the Honourable Minister of Marine and Fisheries, at a meeting of the Board of Trade at St. John, New Brunswick, on the 27th, 28th and 29th January, 1891, relative to the Imperial Load Line Act, and the Bill to prohibit deck loads of timber or deals in winter, now before the Imperial House of Commons.

The President of the Board of Trade was in the Chair, and in introducing the Deputy Minister of Marine to the Board he said that the object of the meeting was to have a full discussion of the deck load question, which was one of great importance to the ship-owners of the city and Province generally. He extended a cordial welcome to the Deputy Minister, whom he had invited to be present at the meeting. When he learned that Mr. Plimsoll, whose name was well known throughout the civilized world as the "Sailors' Friend," had arrived in Montreal and was present at the enquiry recently held there relative to the export cattle trade, he was in hopes that he would have visited St. John before he left this country, and have heard the views of the shipowners and experienced shipmasters on this important subject; but by some oversight Mr. Plimsoll had not been invited to be present, and he understood that he had now returned to England. He hoped, however, that Mr. Smith would give the meeting full information in regard to the Bill now before the British Parliament, and Mr. Plimsoll's proposal to prohibit deck loads of deals from being carried in the winter months, which, if allowed to become law, would be a most serious blow to the shipowners and to the trade of the port generally, as their New Brunswick ships were nearly all built for the purpose of carrying deck loads.

The Deputy Minister of Marine then addressed the meeting, as requested. He said it afforded him much pleasure to meet the Board on this occasion, more particularly as he had spent so many years of his life in an official capacity at that port. He pointed out that Mr. Plimsoll's visit to Canada had no official connection with the enquiry recently held at Montreal into the export cattle trade, but he had been advised by some of his friends to visit this country and the United States, for the purpose of ascertaining how the trade was carried on, and he happened to arrive at a time when he (Mr. Smith) had been instructed to hold a formal enquiry into the subject. He had much pleasure in inviting Mr. Plimsoll to be present at the meetings which were held at Montreal. Mr. Smith then explained to the Board the Bill which had been introduced into the Imperial Parliament, at the instance of Mr. Plimsoll, one of the objects of which was to prohibit the importation of live cattle into England from America, except such cattle as were not imported for purposes of sale or food, and that if this Bill was allowed to become law it would completely destroy our cattle trade, as Canada could not compete successfully with the United States in the dressed beef business. This part of the Bill had been referred to an Inter-Departmental Committee in London, for the purpose of taking evidence in regard to the advisability of allowing it to become law, and the evidence taken at Montreal, Quebec and Three Rivers would be forwarded to the British Government for the information of that committee.

With reference to the Imperial Load Line Act, Mr. Smith explained that the mark on vessels, commonly called "Plimsoll's Mark," was really not his mark, as

when the law was passed requiring vessels to have such a mark painted on their sides, in 1876, Mr. Plimsoll did all he could to have it made a Government mark, but in this he did not succeed, and the mark was required to be placed on the vessel by the owner, which was very much against Mr. Plimsoll's contentions. The Load Line Act recently passed by the Imperial Parliament is the mark which Mr. Plimsoll was contending for in 1876, and is now to be placed on each vessel by an officer of the Board of Trade, or a surveyor of some society sanctioned by the Board of Trade, and may therefore now be considered in reality a Government mark, as desired by Mr. Plimsoll.

The Imperial Act gives power to the Legislature of Canada to provide for marking vessels registered in this country with this mark, provided it is done in accordance with the principles laid down by the Board of Trade; but it is the general opinion of ship-owners that these tables and calculations provided for by the Board of Trade would not apply fairly to Canadian wooden-built vessels, as the rules laid down do not make sufficient allowance for the buoyancy of wooden ships. Mr. Smith also explained, however, that the law did not extend to Canadian vessels when they did not go to English ports, and it only applies to Canadian ships when they are clearing from British ports. However, if a Canadian vessel is properly marked here by a surveyor of French Bureau Veritas, according to the Board of Trade rules, such mark would be accepted by the officers of the British Board of Trade.

In the Bill now before the Imperial Parliament, promoted by Mr. Plimsoll, a provision is made for the abolition of deck loads of timber or deals arriving in England after the 31st October, and if his Bill is allowed to pass any vessels clearing from Canada after the 1st October, and arriving in England with a limited deck load of deals, which they could carry legally, as far as the Canadian law is concerned, would incur a penalty for having this deck load.

If Mr. Plimsoll's Bill is allowed to become law in England we would therefore have the curious anomaly of a vessel clearing legally from a port in Canada after the 1st October, with a deck load of 3 feet of deals, while on arrival in England she would be liable to a penalty for bringing them into that country after the 31st October.

The Canadian deck load law was passed in 1873, which allowed 3 feet of deals on deck in the winter months; and in 1876, when Mr. Plimsoll tried to prohibit deck loads in winter altogether, the provision was made in the Imperial law allowing a deck load of 3 feet of deals on vessels arriving in England after the 31st October. Therefore, the Imperial and Canadian laws are at present in harmony. At the time this law was passed making the Imperial law agree with the Canadian law, Mr. Plimsoll did everything he could to oppose it, as he considered it dangerous to the vessel and also to the lives of the crew to have any deck load in the winter at all, and he was very much annoyed when he found it had been finally adopted by both Houses of the Imperial Legislature.

Mr. Plimsoll has now introduced the subject again, through some of his friends in the House of Commons, and he will no doubt use his influence to have his Bill adopted, which, if passed, will prohibit any of our vessels carrying deck loads of any kind from Canada to England in the winter months, although it is well known that most of our Canadian ships built for the transatlantic trade have been built with high bulwarks, so as to be able to carry 6 or 8 feet of a deck load when needed. From correspondence which the Marine Department has had with ship-owners, it would appear that if deck loads are prohibited altogether in winter it will cause a serious loss to the owners of such vessels. If any person wished to give evidence as to the safety of a limited deck load in winter it would now be in order for him to do so. Of course, it was well understood that the evidence of experienced practical men, who had crossed the Atlantic with deck loads, would be better than the evidence of ship-owners who had not sailed in ships carrying deck loads.

Mr. Smith further stated that he had been informed that some of the ship-owners in St. John thought that no deck load would be better than one of 3 feet,

as it was difficult to have a deck load of 3 feet lashed down sufficiently strong to prevent it washing about and injuring the crew; but he understood that the majority of the ship-owners of St. John would prefer to have a deck load 6 inches above the rail, which they consider much safer than a 3 feet deck load. He was now prepared to hear the evidence of experienced men in the trade, and their views would be submitted to the British Government as soon as the evidence could be taken down and prepared for transmission to the Imperial Board of Trade, through His Excellency the Governor General.

WEDNESDAY, 28th January, 1891.

Mr. W. SMITH, the Deputy Minister of Marine, opened the investigation into the deck load question with the committee appointed at the meeting of persons interested in shipping which was held on the previous day, Tuesday, 27th of January. This committee appointed Mr. GEORGE F. BAIRD, M.P., as their chairman, and he questioned the persons who gave evidence on behalf of the committee.

In opening, Mr. BAIRD said that the evidence which was to be submitted would be from persons who had gone to sea, such as captains, pilots and others—men of practical experience in the matter of carrying deck loads. The committee proposed to show that in the matter of deck loads there was a distinction in favour of the modern-built Canadian ship as compared with iron vessels or iron steamers. The Canadian ship was built for carrying deck loads; as to strength, she even surpassed the requirements of Lloyd's inspection. There was a great distinction between the long, narrow, deep ship, such as was built many years ago in this country, and the modern Canadian or New Brunswick-built ship, and many of the former class met with disasters which are counted to the detriment of the better-built ships of to-day. Within the past twelve or fifteen years the methods of ship-building here had been greatly improved, and ships had been constructed which had a world-wide fame. It was in behalf of these modern ships that a plea was to be entered. The evidence to be offered was also intended to show that a modern-built Canadian ship would carry a deck load level with the top of the rail, or a few inches above it, with greater safety to both the vessel and her crew than would be the case if she sailed with a deck load of 3 feet in height, or half-way up on the rail. This view was held because experience had shown that deck loads flush with the tops of the rails, or a little above them, could be much more securely lashed down than the 3-foot deck loads, and also because when the sea boarded a vessel with a full deck load the water washed over and caused no damage, as had been the case with the 3-foot deck loads, where the water came in upon them and washed them about on the deck.

In reference to the load-line: it was not very clearly understood as to just how it would apply to the wooden ship. As he understood it, the shoaler a vessel was the greater free-board she would have to show. The committee would ask the privilege of getting information upon the subject, and of forwarding to the Marine Department a memorial upon the load line matter.

The Deputy Minister of Marine, Mr. SMITH, assured the committee that the privilege they had asked for would be granted.

Captain H. A. CALHOUN was the first person called to give evidence in regard to the deck load question. His statement was as follows:—

"I have been some thirty odd years master of a ship sailing in the North Atlantic. I always considered a vessel safer with a deck load that was even with the rail or a little above it than she would be with a half deck load. I think all modern-built Canadian vessels under the second-class are fit to carry a full deck load—that is, to the top of the rail. I should limit the deck load to twenty tiers of 3-inch deal, or $5\frac{1}{2}$ feet, and I would recommend a deck load of that height for the

whole year round. I contend that with such a deck load our modern ships would sail safer than in any other way, winter or summer. We always provide protection for the seamen, to keep them from being washed overboard, by putting up a temporary railing around the vessel. These pin-rails and the deck load make the vessel just the same as a vessel having an open rail. This is the only kind of deck load which can be secured properly. I never lost a deck load in thirty years. I also think a deck load level with the rail or a few inches above it is safer than no deck load at all. Some years ago we were allowed to carry only forty-two spars on deck. That was the most dangerous kind of a deck load. I have had experience with 3 foot deck loads, and invariably had bother with them. The chance for lashing inside the rails is not be compared to the chance for fastening on the outside from the top of the rails.

"I solemnly declare the above to be a true statement, made by me before Mr. Smith, Deputy Minister of Marine, on the 28th day of January 1891.

"(Signed) H. A. CALHOUN."

Captain W. R. McMANN, examined, stated as follows:—

"I have been a shipmaster for about fourteen years; I was a member of the firm of McMann & Sons, and am a shipowner. In my experience in sailing across the western ocean, carrying deals to the United Kingdom, I sailed first-class wooden ships of Canadian build and carried deck loads at times. I will give my experience with two vessels in carrying deck loads. In the first case I left here in the month of January, about 25 years ago, in the bark Morning Star, bound for the West Indies. After getting out of the bay, we experienced a gale from the north-east. We had a deck load level with the rails. The sea ran mountains high as the gale increased, and washed over the deck load. My opinion was that the vessel would never have stood the weight of water that came upon her. If we had only been carrying a half deck load it would have forced the bulwarks out of her. In my opinion the deck load saved the vessel, and consider that without it the chances were that she would not have weathered the gale. In another case I went to Liverpool in the summer season with about the same kind of a deck load. We experienced a gale and the sea rolled on to the vessel with tremendous weight, and from my experience then I came to the conclusion that a vessel was safer in a sea with a reasonable deck load than without it, and that the lives of the sailors were safer, too. With a part deck load, or one which does not come up to the top of the rails, when the vessel ships water the deck load gets afloat on the vessel and washes about, causing danger to the seamen on board. I think $5\frac{1}{2}$ feet would be a good height for a deck load all the year round. A properly double-decked vessel should carry a deck load just as well as a single-decked one. I agree with Mr. Calhoun in reference to the lashings being more secure with a full deck load than with a part deckload."

"(Signed) W. R. McMANN."

Mr. ROBERT REED, a prominent gentleman, who was interested in shipping and had experience with vessels, gave it as his opinion that the vessel was easier with a reasonable deck load than without it. He favoured a deck load up to the top of the rail or a little above it.

Captain CLEVELAND stated as follows:—

"I am a master mariner, and have sailed in nearly all classes of vessels in the western ocean carrying deals to the United Kingdom. I would consider that a single-decked Canadian ship is much safer with a deck load than without it. I would say the deck load should not be less than $5\frac{1}{2}$ feet in winter and more in

the summer. I am in favour of a deck load level with or above the rail, because there is a chance to lash it securely. There is no way of lashing a deck load securely when it is below the rail. Take a vessel with a rail 6 feet high and a 3 foot deck load. In rough weather the water would be running over the side and washing backwards and forwards on the ship; whereas, if the deck load was level with the rail the water would wash off as fast as it came on. I have had experience with a 3 foot deck load. In rough weather the water ran over the side of the vessel and set the deck load adrift. I have never seen any danger resulting from carrying a full deck load. The seamen would not be as liable to go over the temporary railing that is put round the deck load as they would be to go off a spar-decked ship. I consider the vessels easier to themselves and safer for the sailors when they have a reasonable deck load than without it.

"I solemnly declare the above to be a true and accurate statement, made by me before the Deputy Minister of Marine, on 28th January, 1891.

"(Signed) WILLIAM CLEVELAND."

BARTHOLEMEW RODGERS stated:—

"I am a pilot at the port of St. John; I have gone across the western ocean six times. Deals were the cargo from this side, and railroad iron the return cargo. This was in Canadian ships. Twenty years ago last May I went across in a Nova Scotia-built barque called the 'John Boyd.' We had a high deck load, and although we had some heavy weather we were never obliged to heave her to at all, and could run her all the time. The next time I went from here was in 1874, in a ship called the 'W. D. Lawrence.' It was in the winter season, and she had a 3 foot deck load. We got in a gale the morning after we left, and the sea ran up on both sides of the ship and began to flop over on to the deck load. It bursted the deck load all adrift. It washed about so that the captain thought some of the men would be killed, and to prevent this he threw the whole deck load overboard. There is no chance to lash these 3 foot deckloads down at all. This was a 2,400 ton vessel, and from the water to the top of her covering board she had about 6 feet of free-board. Her rail would be all of 6 feet above that again, and still the sea ran so high that the water slopped in on both sides, as I have stated. When the deck load broke adrift on deck every man had to look out for himself. In my opinion, if she had been carrying a full deck load, or one above the rail, the water would have washed along the sides of the ship without doing her any harm, as when it came on to her it would wash off again as fast as it came on; and a full deck load can be lashed so that it could not possibly get adrift. I never lost a deal with a full deck load, nor never knew of any extra exposure to the sailors on account of a vessel carrying a full deck load—that is, on our Canadian ships. Take an English ship, or a ship that is deep, is narrow, long and sharp, and load her with light deals below and wet deals between decks, as sometimes happens. You get her under canvas and she lists over and happens to take a large sea aboard, and heaves down on her beam ends. Before you would be able to straighten that ship up you would have to cut her masts away.

"MR. BAIRD.—In your piloting, have you noticed the action of vessels going out of here?—A. Yes; I remember a ship owned by Captain Calhoun that got ashore on the other side of the Atlantic on her first voyage. She was damaged considerable and had a new side put in her there, so that when she came back one side of her was spruce and the other side was pitch pine and oak. They had to put about 250 tons extra ballast on the light side to keep her straight up. I took her out of here with a full deck load. It blowed so hard after we passed Briar Island in the Bay of Fundy, that all we could carry was top-sails and fore-sails, and the seas would run up along the sides of the ship and wash on to the deck load, but they did her no harm; whereas, if she had had a 3 foot deck load they would have boarded her, and I don't believe we could have saved her without cutting the masts away.

Q. What experience did you have with the cargo of iron?—A. Well, we left Cardiff on the 7th of March, and on the 15th experienced a gale, and while the rough weather lasted the men turned in wet every time, and we had to just watch our chance to get aft, with the sea pouring in over the rails and washing backwards and forwards on the deck. I believe that if that ship had had a cargo on deck she would have weathered the storm better than she did. I think that a man can run a ship that has a deck load level with the rails better than a ship that has no deck load at all, whether she is tender or otherwise, because if she happens to take a sea when she is fetched to the wind without any deck load on, and she is hove down, the chances are she won't recover without cutting the masts out.

"MR. SMITH.—Would it make it better to have the vessel built with the deck higher up and not so much rail, so that she could carry just the same amount of cargo below deck as she would deck load and all; that is, to have a flush deck over everything the same as the Atlantic steamers?—A. "Yes; but you would have to have three or four decks below cover then, and the vessel would not be suitable for shoal water. The spar-decked vessel is not half so safe for the sailor as the vessel with a full deck load. When the spar-decked vessel takes a lurch the sailor is apt to go over the low rail, but on a vessel with a full deck load the temporary railing is too high to allow him to fall over or get washed off easily.

"I solemnly declare the above to be an accurate and true statement made by me before the Deputy Minister of Marine, on the 28th of January, 1891.

"(Signed) B. ROGERS.

Pilot HENRY SPEARS gave the following evidence:—

"I am a licensed pilot at the port of St. John. I have had experience on the western ocean in carrying deals to the United Kingdom. About twenty-two years ago I went across in a ship with a full deck load. I think the deck load was a couple of feet above the rail. The ship was about 700 or 800 tons, and although it was in the month of February when we started, and we had rough weather, being forty-two days on the passage, she carried every deal across. When the sea boarded us it would come on one side and go over the other. The deck load was lashed with spars over the rail. You can't lash a 3-foot deck load so as to make it safe. I also went across in an American ship, the 'A. McCallum.' She was about 1,900 or 2,000 tons. She had bulwarks about 5 feet high or more, and carried no deck load that time. We left here the week before Christmas. There was some furniture in one of the forecastles for Mr. Roberts, of Liverpool, England. We got into a heavy gale and were obliged to heave to. The sea broke over the vessel in the night and carried away the whole port side of the fore-castle and washed it and the men in it about the deck with a lot of dunnage that was forward. In the dark we could hardly tell whether it was men or sticks floating about. The men had great trouble in saving themselves and some of them were injured badly. The sea filled all the cabins with water. I contend that if the vessel had carried a deck load the height of her rail this trouble would never have occurred, for when the sea came aboard it would have washed off again. My opinion is, that one of our Canadian-built ships is much easier with a deck load than without it. I know from experience that these ships with a deck load roll down easy and come back easy, while with no deck load they roll stiff and sharp and come back with a jerk that will toss people about on the deck, so that they will have trouble to hang on.

"I solemnly declare the above to be an accurate and true statement made by me before the Deputy Minister of Marine on the 28th January, 1891.

"(Signed) HENRY SPEARS."

Captain A. T. ROUSE, stated :—

"I have been a shipmaster for 17 years out of this port. In regard to deck loads, I think the deck load that is above the rail is the safest one for both the sailors and the vessel. I would sooner go across in a vessel with a deck load on than I would with one without a deck load. I would approve of a law allowing a deckload of 6 inches above the rail the whole year round. As to my experience with 3-foot deck loads, I have gone out of here with a 3-foot deck load in winter and we had to get into the rigging to save our lives and stay there till it was washed overboard. There is no way of lashing a 3-foot deckload so as to make it safe. If it was left entirely to me whether I should take a deck load or not I would take a deck load every time. I never found the snow or ice any difficulty. I once went down from here to the West Indies in winter. The deck load was below the rail. We could not lash it properly, and it got washed off. The men never took sick or flinched their work till after the deck load was lost. After that the men were washed to pieces, and we came near losing the vessel. The men were made sick through the exposure of being washed about in the water on deck, and two of them died from the exhaustion caused in that way.

"I solemnly declare the above to be an accurate and true statement made by me before the Deputy Minister of Marine, on 28th January, 1891.

"(Signed) A. T. ROUSE."

Captain J. E. MASTERS stated :—

"I was a shipmaster for a great many years, and have had considerable experience, and that experience causes me to be in favour of carrying a deck load of a certain height—that is, above the rail. Deck loads that do not come up to the top of the rail are very undesirable. I once made a trip to South America in a vessel with a deck load below the rail, and I must confess it was the toughest experience I ever had. I think a law making a reasonable deck load for both summer and winter would be much better than the present system. Sometimes there is a tendency on the part of owners to put too little ballast in a vessel, and the deck load is apt to get the blame for the trouble arising as a result of that. When I went to sea we had the full deck loads as high as we thought best to put them. I made two voyages with a deck load 3 or 4 feet above the deck, but had trouble, as the water gets under that kind of a deck load and you can't secure it properly.

"I solemnly declare the above to be an accurate and true statement made by me before the Deputy Minister of Marine, on the 28th of January, 1891.

"(Signed) J. E. MASTERS."

Captain WILLIAM THOMAS, Insurance Inspector, stated :—

"I do not approve of deck loads in the winter time, not even of a deck load 6 inches above the rail. I would approve of deck loads in summer, high enough to come about 3 inches above the rail, so as to give a chance to lash it. I would have vessels carry such a deck load from the 15th of April to the 15th of August.

"Q. What would you think of a deck load law that would allow 6 inches above the rail all the year round?—A. I would not think it a good law. I have had no experience with a deck load in winter. If I was commanding a ship now, and was compelled to take a deck load, I would rather have one 6 inches above the rail than a 3-foot one. I am insurance inspector. The question of insurance has no influence upon my opinions whatever.

"Mr. BAIRD.—It is said by some persons that when the sea washes over and the space between the rails and bulwarks becomes filled with water that that is the worst kind of a deck load a vessel could have. Is that correct?—A. A vessel may ship

large quantities of water, but never in my experience did it come level with rail. "Q. Did you ever hear of a seaman being washed off a deck load?—A. No; but I heard of a pilot being washed off in the harbour.

"I solemnly declare that the above is an accurate and true statement made by me on 28th January, 1891."

"(Signed) WM. THOMAS."

RICHARD CLINE stated :—

"I am a registered pilot at the port of St. John. I have been across the western ocean when they carried spars on deck. I have taken a good many vessels out of the Bay of Fundy with all kinds of loads. I think a deck load which is 6 inches over the rail is like a hurricane deck and is much better than a 3-foot deck load. She would be easier with it. I believe that if some of those iron ships which roll so with cargoes of grain could have a deck load of deals it would steady them. In taking the steamer 'Gothenburg City,' of the Furness Line, to and from Halifax, I have noticed that she was much easier in going from here when she had a deck load of deals than she was in coming here from Halifax when she had no deck load. When she had no deck load she would roll sharp and heavy, but with a deck load she would roll much easier. I would expect as much or greater safety with the vessel's waist full of lumber than I would it she had a small deck load, because the water would have no chance to stay on deck. I recollect the Anchor Line steamers, which carried no deck load, or only a part of one. The captains used to say that all the trouble was that they filled up with water on deck and that water could not be got off easily.

"I solemnly declare the above to be an accurate and true statement made by me before the Deputy Minister of Marine, on the 28th January, 1891."

"(Signed) RICHARD CLINE."

Mr. T. H. SIME, Surveyor for Bureau Veritas, in St. John, gave evidence as to the effect of the Imperial Load Line on Canadian wooden ships, and their deck-loads, but he did not wish it made public.

Mr. SIME was the last witness called in the deck load investigation.

When he had finished giving evidence, Mr. G. F. Baird, M.P., thanked the Deputy Minister, Mr. Smith, for the fair and equitable manner in which he had conducted the investigation, and said that the shipping interests felt satisfied to leave it in his hands to see that their claims on behalf of wooden vessels were properly represented.

The next question was the load line question. In regard to that, he wished to say that the ship owners and others interested in shipping had not yet enquired sufficiently into its bearings upon wooden vessels to enable them to state their views clearly upon the question. They, however, intended to make a careful enquiry into the subject, and if it was found, as it is believed to be, very detrimental to the wooden shipping interests, they would forward a memorial to the Marine Department of Canada, setting forth the views of the shipping interests in regard to it, and asking that some measures be taken to prevent it from applying to Canadian vessels.

The investigation was then adjourned.

APPENDIX.

While Captain Calhoun, the first witness, was giving evidence, Mr. André Cushing, a prominent mill-owner, and a gentleman interested to a considerable extent in lumbering and shipping, rose, and was allowed to express his views upon the deck load subject.

He stated that his suggestion would be to have a law framed upon the judgment of competent persons at each port, so that the deck load of a vessel could be decided upon, as to the amount she should carry, by some properly-appointed officer, who could decide the matter according to the shape or build of the vessel. He believes that every vessel should have a certain amount of deck load, and thought that it might be properly fixed by a person who had had experience in such matters, and who understood the carrying capacity of vessels.

THE BOARD OF TRADE, HALIFAX.

HALIFAX, N.S., 12th February, 1891.

SIR,—I have the honour to inform you that at a meeting of the Council of this Board held on 27th January the following resolution was passed regarding deck loads, and forwarded to the St. John Board of Trade while you were there investigating the subject.

Resolved,—“That this Board are quite in accord with the advocates of the existing law respecting deck loads, believing such law is just to the shipowner, and secures the safety of the sailor.”

Your obedient servant,

CHARLES M. CREED,

Secretary Board of Trade of Halifax, N.S.

WM. SMITH, Esq.,

Deputy Minister of Marine,
Ottawa.

HALIFAX, 13th February, 1891.

I hereby declare that as a ship-owner of some thirty years' experience, I am most decidedly in favour of the existing law allowing deck loads of 3 feet above the deck, and believe it is in the best interests of shipmasters and sailors, and would be most heartily sorry to see it rescinded.

WILEY SMITH,

For A. & W. Smith & Co.

HALIFAX, N.S., 14th February, 1891.

I, E. Rostrup, do solemnly declare that I believe the present deck load law to be in the best interests of shipmasters and sailors, and I make this solemn declara-

tion conscientiously believing the same to be true, and by virtue of the "Act respecting Extra Judicial Oaths," 37 V., c. 37, Schedule.

E. ROSTRUP,

Master Norwegian Bark "Christina Scriva."

Declared before me.

(Signed) ISAAC H. MATHERS, J. P.,
in and for the County of Halifax.

HALIFAX, N.S., 14th February, 1891.

I, James A. Crowe, do solemnly declare that I believe the present deck load law to be in the best interests of shipmasters and sailors, and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the "Act respecting Extra Judicial Oaths," 37 V., c. 37, Schedule.

JAMES A. CROWE,

Master British Ship "Selkirk."

Declared before me.

(Signed) JOHN P. LONGARD, J. P.,
in and for the County of Halifax.

HALIFAX, N.S., 14th February, 1891.

I, Ove Lange, do solemnly declare that I believe the present deck load law to be in the best interests of shipmasters and sailors, and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the "Act respecting Extra Judicial Oaths" 37 V., c. 37, Schedule.

OVE LANGE,

Shipmaster.

Declared before me,

(Signed) ISAAC H. MATHERS, J. P.,
in and for the County of Halifax.

ST. JOHN, N.B., 23rd January, 1891.

DEAR SIR,—You ask for an expression of views on the "deck load question." In the House of Commons Mr. Mitchell, referring to the "deck load question," said: "He simply provided in his Bill, that between the 1st October and 16th March vessels should be prevented, not from carrying any deck loads, but from carrying 3 feet of deck loads in the transatlantic voyage, because he held that a limited deck load, in the shape of deals and shooks, really helped a ship, and did not injure her. Vessels in the Cuba trade, he said, would be allowed to carry 4½ feet deck loads."

Mr. Burpee said, if Parliament passed such a Bill it would restrict the trade of the country, and allow foreigners to come in and take the trade from our own doors. He contended that New Brunswick ships were more safe with a deck load than others without one. Referring to the old ships engaged in the Quebec timber trade, and in respect to loss of life, he said he was in a position to say—that in the last five years, in which period 1,000 vessels had sailed from St. John, not more than 10 lives were lost owing to deck loads. The same argument can be used to-day; vessels are just as safe now as then to carry deck loads, and the experience of captains in our employ and those we have come in contact with is, that ships are safer with than without deck loads, and for schooners more especially so, as they are built with that end in view, viz., the carrying of deck loads, and do carry one-third to one-half of their

cargoes on deck. A vessel without any deck load is at once unsafe, as in rough weather her decks are loaded down with water and become awash, and the poor sailors, Mr. Plimsoll's dear friends, have a hard time of it. I contend there is too much legislation regarding ships, and if they were let alone for awhile the industry might survive; but the constant dread of adverse legislation, with the new load line legislation, &c., &c., is killing the industry, and by-and-bye there will be no ships to carry the under deck cargoes. If ships are restricted to carrying only under deck cargoes the wooden vessel cannot be made to pay, unless the rate of freight is materially advanced; and, in the present state of the wood trade in European markets, that would mean an entire cessation of shipments. Again, even now, with the restrictive deck load legislation for cargoes for the West Indies, we are handicapped, as Maine has similar lumber to export, and their vessels can carry full deck loads, and of course with cost of lumber the same and less freight we can hardly be expected to compete, and gradually it has taken our trade away. Again, if this deck load restriction means to apply to our coastwise trade, this means its entire extinction, as vessels could not be made to pay unless they had the privilege of carrying full deck loads, as now.

Thus, briefly and hurriedly I enter my protest against the scheme of deck load restriction.

Sincerely yours,

J. H. SCAMMELL.

IRA CORNWALL, Esq.,
Secretary Board of Trade.



